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# DELTA Test Report

TEST Reg. no. 19

## Radio parameter test of FD-2 according to FCC and IC specifications

## Performed for GN Hearing A/S

DANAK-19/13209
Project no.: T205844-2
Page 1 of 96
Including 1 annex

12 July 2013

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| | |
|---|---|
| Title | Radio parameter test of FD-2 according to FCC and IC specifications |
| Test object | FD-2 |
| Report no. | DANAK-19/13209 |
| Project no. | T205844-2 |
| Test period | 22 May to 06 June 2013 |
| Client | GN Hearing A/S<br>Lautrupbjerg 7<br>2750 Ballerup<br>Denmark<br>Tel.: +45 45 75 11 11 |
| Contact person | Vinnie Nørager<br>E-mail: vnoerager@gnresound.dk |
| Manufacturer | GN Hearing A/S |
| Specifications | See Section 1, Summary of tests |
| Results | The test objects were found to be in compliance with the specifications, as listed in Section 1 |
| Test personnel | Peter Wolf Frandsen |
| Test site(s) | DELTA, Venlighedsvej 4, 2970 Hørsholm, Denmark |

Date 12 July 2013

Project Manager

Peter Wolf Frandsen
Specialist, EMC & Wireless
DELTA

Responsible

Claus Rømer Andersen
Business Manager, Consulting
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# 1. Summary of tests

The authorization procedures for the FD-2 are:

Declaration of Conformity by FCC Part 15 B, Class B (residential use).
Certification by FCC Part 15 C.

| Tests | Test methods | Rule Section | Results |
|---|---|---|---|
| Measurement of radio frequency voltage on mains | ANCI C63.10:2009 | 47 CFR Part 15.107<br>47 CFR Part 15.207<br>RSS-Gen, 4.10 | Passed |
| Measurement of radiated emission | ANCI C63.10:2009 | 47 CFR Part 15.109<br>47 CFR Part 15.209<br>47 CFR Part 15.249(a)(d)(e)<br>RSS-210, 2.5 & A2.9 | Passed |
| Measurement of field strength of fundamental | ANCI C63.10:2009 | 47 CFR Part 15.249(a)(e)<br>RSS-210, 2.5 & A2.9 | Passed |
| Measurement of 20 dB bandwidth | ANCI C63.10:2009 | 47 CFR Part 15.215(c) | Passed |
| Measurement of band edge compliance | ANCI C63.10:2009 | 47 CFR Part 15.209(a)<br>47 CFR Part 15.249(d)(e)<br>RSS-210, 2.5 & A2.9 | Passed |
| Measurement of occupied bandwidth | RSS-Gen, Issue 3:2010 | RSS-Gen, 4.6.1 | Passed |
| Measurement of radiated emission, receiver | NOTICE 2012-DRS0126 | RSS-Gen, 6<br>RSS-210, 2.5 | Not Applicable |

The given result is based on a shared risk principle with respect to the measurement uncertainty.

**Conclusion**

The test objects mentioned in this report meet the requirements of the standards stated below.

- 47 CFR Part 15, Subpart B, Class B
- 47 CFR Part 15, Subpart C (Specific rule part §15.249)
- RSS-210, Issue 8:2010
- RSS-Gen, Issue 3:2010.

The test results relate only to the objects tested.

# 2. Test objects and auxiliary equipment


Photo 2.1.1 Test objects.

## 2.1 Test objects

**Test object 2.1.1**

| | |
|---|---|
| Name of test object | FD-2 |
| Model / type | FD-2 |
| Part no. | FD-2 |
| Serial no. | 131500050 |
| FCC ID | X26FD-3 |
| IC ID | 6941C-FD2 |
| Manufacturer | GN Hearing A/S |
| Supply voltage | Powered through USB port by AUX PC |
| Software version | Spurious emission firmware: Tx and Rx |
| Hardware version | - |
| Cycle time | 3 ms |
| Highest frequency generated or used | 2483.5 MHz |
| Comment | GN proximity radio |

**Test object 2.1.2**

| | |
|---|---|
| Name of test object | FD-2 |
| Model / type | FD-2 |
| Part no. | FD-2 |
| Serial no. | 131500013 |
| FCC ID | X26FD-3 |
| IC ID | 6941C-FD2 |
| Manufacturer | GN Hearing A/S |
| Supply voltage | Powered through USB port by AUX PC |
| Software version | Spurious emission firmware: Tx and Rx |
| Hardware version | - |
| Cycle time | 1.5 ms |
| Highest frequency generated or used | 2483.5 MHz |
| Comment | Bluetooth radio BLE ANT12 |

**Test object 2.1.3**

| | |
|---|---|
| Name of test object | FD-2 |
| Model / type | FD-2 |
| Part no. | FD-2 |
| Serial no. | 131500043 |
| FCC ID | X26FD-3 |
| IC ID | 6941C-FD2 |
| Manufacturer | GN Hearing A/S |
| Supply voltage | Powered through USB port by AUX PC |
| Software version | Spurious emission firmware: Tx and Rx |
| Hardware version | - |
| Cycle time | 1.5 ms |
| Highest frequency generated or used | 2483.5 MHz |
| Comment | Bluetooth radio BLE ANT2 |

**Test object 2.1.4**

| | |
|---|---|
| Name of test object | FD-2 |
| Model / type | FD-2 |
| Part no. | FD-2 |
| Serial no. | 131500045 |
| FCC ID | X26FD-3 |
| IC ID | 6941C-FD2 |
| Manufacturer | GN Hearing A/S |
| Supply voltage | Powered through USB port by AUX PC |
| Software version | Spurious emission firmware: Tx and Rx |
| Hardware version | - |
| Cycle time | 1.5 ms |
| Highest frequency generated or used | 2483.5 MHz |
| Comment | Bluetooth radio BLE ANT1 |

**Test object 2.1.5**

| | |
|---|---|
| Name of test object | FD-2 |
| Model / type | FD-2 |
| Part no. | FD-2 |
| Serial no. | 131500041 |
| FCC ID | X26FD-2 |
| IC ID | 6941C-FD2 |
| Manufacturer | GN Hearing A/S |
| Supply voltage | Powered through USB port by AUX PC |
| Software version | Spurious emission firmware: Tx |
| Hardware version | - |
| Cycle time | 3 ms |
| Highest frequency generated or used | 2483.5 MHz |
| Comment | Antennas replaced by SMA connectors<br>GN radio ON, switching between antenna 1 and 2 |

**Test object 2.1.6**

| | |
|---|---|
| Name of test object | FD-2 |
| Model / type | FD-2 |
| Part no. | FD-2 |
| Serial no. | 131500046 |
| FCC ID | X26FD-2 |
| IC ID | 6941C-FD2 |
| Manufacturer | GN Hearing A/S |
| Supply voltage | Powered through USB port by AUX PC |
| Software version | Spurious emission firmware: Tx |
| Hardware version | - |
| Cycle time | 1.3 ms |
| Highest frequency generated or used | 2483.5 MHz |
| Comment | Antennas replaced by SMA connectors<br>BTLE radio ON, antenna 1 ON |

**Test object 2.1.7**

| | |
|---|---|
| Name of test object | FD-2 |
| Model / type | FD-2 |
| Part no. | FD-2 |
| Serial no. | 131500038 |
| FCC ID | X26FD-2 |
| IC ID | 6941C-FD2 |
| Manufacturer | GN Hearing A/S |
| Supply voltage | Powered through USB port by AUX PC |
| Software version | Spurious emission firmware: Tx |
| Hardware version | - |
| Cycle time | 1.3 ms |
| Highest frequency generated or used | 2483.5 MHz |
| Comment | Antennas replaced by SMA connectors<br>BTLE radio ON, antenna 2 ON |

## 2.2 Auxiliary equipment


Photo 2.2.1 Auxiliary equipment.

**Auxiliary equipment 2.2.1**

| | |
|---|---|
| Name of auxiliary equipment | AUX PC |
| Model / type | Lenovo B570e |
| Part no. | 59340073 |
| Serial no. | WB07509560 |
| FCC ID | - |
| Manufacturer | Lenovo |
| Supply voltage | 20 VDC |
| Highest frequency generated or used | - |
| Comment | None |

**Auxiliary equipment 2.2.2**

| | |
|---|---|
| Name of auxiliary equipment | Power adaptor for AUX PC |
| Model / type | ADP-65KH B |
| Part no. | 36001929 |
| Serial no. | 11S36001929ZZ40026C9D9 |
| FCC ID | - |
| Manufacturer | Lenovo |
| Supply voltage | 100-240 VAC |
| Highest frequency generated or used | - |
| Comment | None |

# 3. General test conditions

## 3.1 Test setup during test

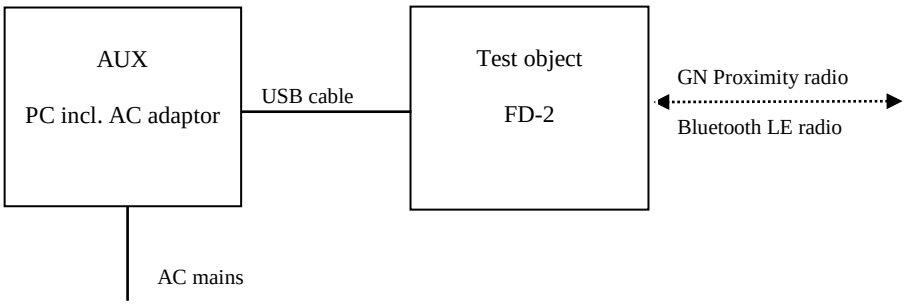



Figure 3.1.1 Block diagram of test object with cables and auxiliary equipment.

### 3.1.1 Description and intended use of test object

FD-2 is an accessory to hearing instruments, containing a GN Resound proximity radio and Bluetooth LE wireless radio. Only one radio is used at a time.

FD-2 is controlled and powered from an USB port through a PC.

### 3.1.2 Test modes during tests

All test objects were running special test software

During test, the test objects were in continuous Tx mode (normal modulation, normal data packets with optimised repetition rate).

Tests were performed at three frequencies for the GN radio at worse case power settings:

- Low frequency: 2404 MHz
- Middle frequency: 2441 MHz
- High frequency: 2478 MHz.

Relevant test are repeated with the additional modulation using the pay load. Related packed types are e.g. GFSK.

Tests were performed at three frequencies for the Bluetooth radio:

- Low frequency: 2402 MHz
- Middle frequency: 2440 MHz
- High frequency: 2480 MHz.

During relevant tests, the external DC power supply was used.

## 3.2 Radio specifications, receiver and transmitter, GN radio

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | ANT-1 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | See section 2 | Date | 11 June 2013 |
| Client | GN Hearing A/S | | |
| Specification | See Section 1 Summary of tests | | |

The radio of the test object has the following specified RF parameters. The below mentioned information regarding the receiver and the transmitter is declared by the manufacturer.

| | | |
|---|---|---|
| Type of equipment | : | Low power device (2400-2483.5 MHz) |
| Operating frequency range | : | 2404 to 2478 MHz |
| Antenna | : | Two space diversity permanently attached PCB antennas |
| Maximum gain | : | 1.7 dBi |
| Transmit power, max peak | : | 18.3 dBm peak EIRP |
| Field Strength, max avg. | : | 94 dBµV/m avg (50 mV/m) @ 3 meter |
| Field Strength, max pk. | : | 113.5 dBµV/m pk (473 mV/m) @ 3 meter |
| Conducted power, max avg. | : | 6.9 dBm |
| Conducted power, max pk. | : | 16.6 dBm |
| Power level | : | 2 |
| No of channels | : | 20 |
| Bandwidth | : | |
| Occupied bandwidths (99%) | : | 2.2 MHz (Measured) |
| Channel separation | : | 2 MHz |
| Modulation | : | GFSK |
| Data rate | : | 2 Mbits |
| Duty cycle | : | 10 % during normal mode |
| Transmit mode | : | Yes |
| Receive mode | : | Yes |
| Standby mode | : | Yes |
| Power supply | : | 5 VDC through a USB port |
| Specified min voltage | : | 4.4 VDC |
| Specified max voltage | : | 5.5 VDC |
| Temperature category | : | -20 to +55 ºC. |
| Emission Designator | : | 2M2F7E |
| Max. TX spurious emission, average | : | 85 (µV/m) @ 3 meter (Field Strength) |
| Max. TX spurious emission, peak | : | 804 (µV/m) @ 3 meter (Field Strength) |

## 3.3 Radio specifications, receiver and transmitter, Bluetooth LE radio

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | ANT-2 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | See section 2 | Date | 11 June 2013 |
| Client | GN Hearing A/S | | |
| Specification | See Section 1 Summary of tests | | |

The radio of the test object has the following specified RF parameters. The below mentioned information regarding the receiver and the transmitter is declared by the manufacturer.

| | | |
|---|---|---|
| Type of equipment | : | Low power device (2400-2483.5 MHz) |
| Operating frequency range | : | 2402 to 2480 MHz |
| Antenna | : | Two space diversity permanently attached PCB antennas |
| Maximum gain | : | -2.1 dBi |
| Transmit power, max peak | : | -0.1 dBm peak EIRP |
| Field Strength, max avg. | : | 91.5 dBµV/m avg (38 mV/m) @ 3 meter |
| Field Strength, max pk. | : | 95.1 dBµV/m pk (57 mV/m) @ 3 meter |
| Conducted power, max avg. | : | 0.2 dBm |
| Conducted power, max pk. | : | 2 dBm |
| Power level | : | No |
| No of channels | : | 40 |
| Bandwidth | : | |
| Occupied bandwidths (99%) | : | 2.2 MHz (Measured) |
| Channel separation | : | 2 MHz |
| Modulation | : | GFSK |
| Data rate | : | 2 Mbits |
| Duty cycle | : | 10 % during normal mode |
| Transmit mode | : | Yes |
| Receive mode | : | Yes |
| Standby mode | : | Yes |
| Power supply | : | 5 VDC through a USB port |
| Specified min voltage | : | 4.4 VDC |
| Specified max voltage | : | 5.5 VDC |
| Temperature category | : | -20 to +55 ºC. |
| Emission Designator | : | 2M2F7E |
| Max. TX spurious emission, average | : | 484 (µV/m) @ 3 meter (Field Strength) |
| Max. TX spurious emission, peak | : | 733 (µV/m) @ 3 meter (Field Strength) |

# 4. Test results

## 4.1 Duty cycle correction factor (δ), GN radio

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | ANT-3 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500050 | Date | 11 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: 5 VDC | Temperature<br>Humidity | 22 °C<br>54 % RH |
| Test equipm. | SRD lab Hørsholm 49548 | Uncertainty | 0.01 dB |
| SA Settings | RBW: 1 MHz VBW: 3 MHz SPAN: Zero-1ms DET: Peak CF: 2404 MHz Trace: Max Hold | | |

The duty cycle correction factor (δ) can be applied to the peak pulse amplitude to find the average emission. This is valid for one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds.

The duty cycle correction factor is determined as follows:

The measured value for the duty cycle (D) is:

Max. Tx on time: 160 µs + 160 µs – Delta 3 (T1)

Period: 3010 µs – Delta 2 (T1).

The calculated duty cycle expressed in % is:

D(%) ((Max. Tx on time) µs / (period) µs) • 100% = 10.6 %.

The calculated duty cycle correction factor expressed in dB is:

δ(dB): 20 log (Max. Tx on time (µs) / period (µs)) = -19.5 dB.

According to ANSI C63.10.2009 (Section 4.2.3.2.4), FCC CFR 47 Part 15 Subpart C (Section 15.35(c)) and RSS-Gen (Section 4.5) this correction factor can be applied for all emissions including the fundamental and harmonics above 1 GHz.

The corrected average is: PAverage(resulting) = Ppeak + DCCF (δ).

Max. Tx on time used with ANT1 and ANT 2. Therefore, two on cycles are used.

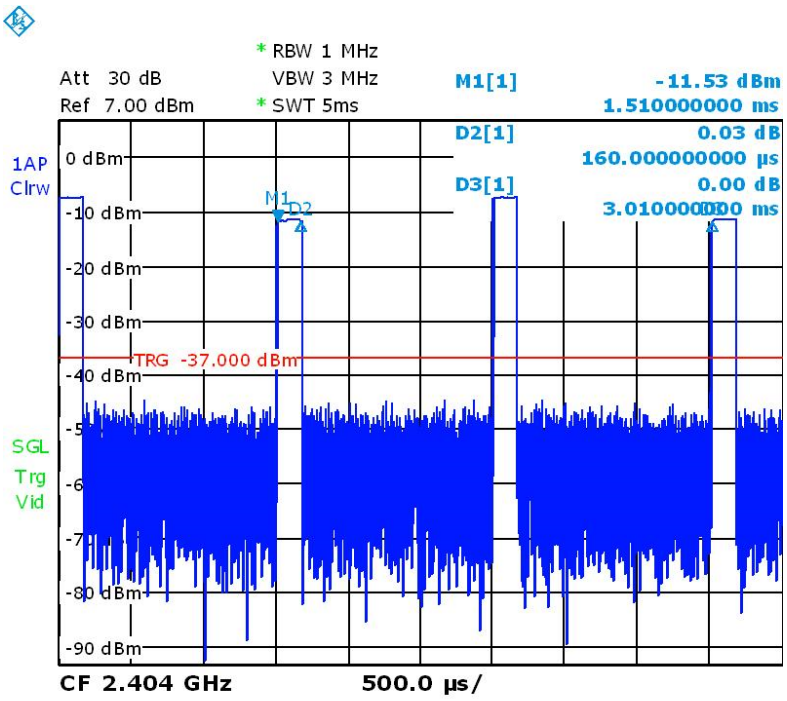



Photo 4.1.1 Test setup regarding duty cycle correction factor (δ), GN radio.

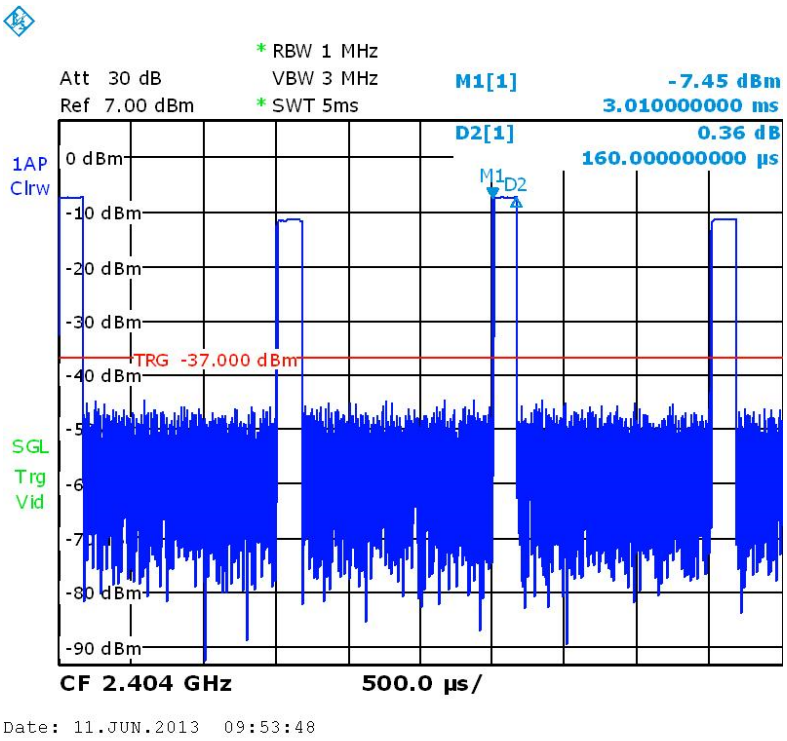



Photo 4.1.2 Test setup regarding duty cycle correction factor (δ), GN radio.

## 4.2 Duty cycle correction factor (δ), BT radio

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | ANT-4 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500013 | Date | 11 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: 5 VDC | Temperature<br>Humidity | 22 °C<br>54 % RH |
| Test equipm. | SRD lab Hørsholm 49548 | Uncertainty | 0.01 dB |
| SA Settings | RBW: 1 MHz VBW: 3 MHz SPAN: Zero-1ms DET: Peak CF: 2402 MHz Trace: Max Hold | | |

The duty cycle correction factor (δ) can be applied to the peak pulse amplitude to find the average emission. This is valid for one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds.

The duty cycle correction factor is determined as follows:

The measured value for the duty cycle (D) is:

Max. Tx on time: 828 µs – Delta 3 (T1)

Period: 1260 µs – Delta 2 (T1).

The calculated duty cycle expressed in % is:

D(%) ((Max. Tx on time) µs / (period) µs) • 100% = 65.7 %.

The calculated duty cycle correction factor expressed in dB is:

δ(dB): 20 log (Max. Tx on time (µs) / period (µs)) = -3.6 dB.

According to ANSI C63.10.2009 (Section 4.2.3.2.4), FCC CFR 47 Part 15 Subpart C (Section 15.35(c)) and RSS-Gen (Section 4.5) this correction factor can be applied for all emissions including the fundamental and harmonics above 1 GHz.

The corrected average is: PAverage(resulting) = Ppeak + DCCF (δ).

Max. Tx on time used with ANT1 and ANT 2. Therefore, two on cycles are used.

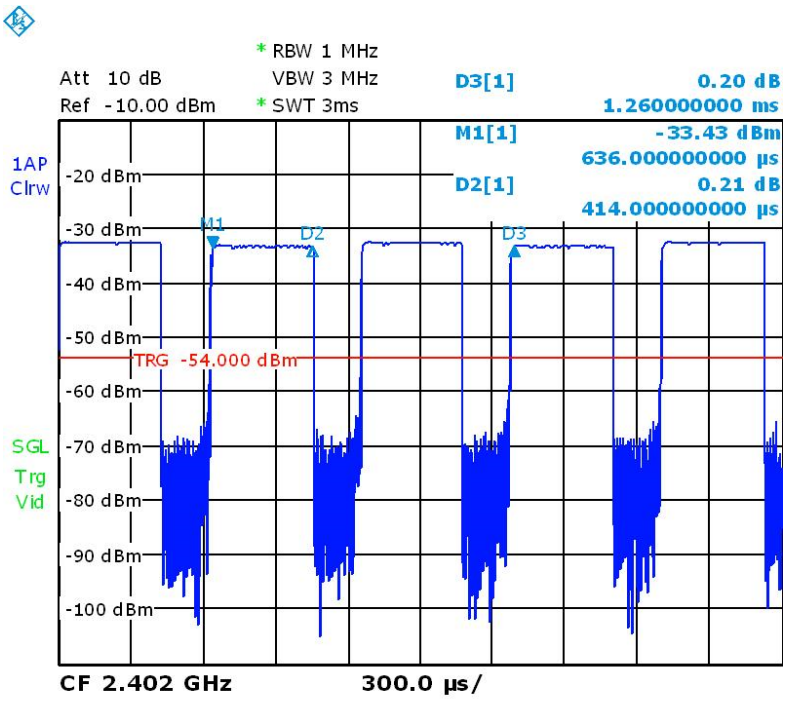



Photo 4.2.1 Test setup regarding duty cycle correction factor (δ), BT radio.

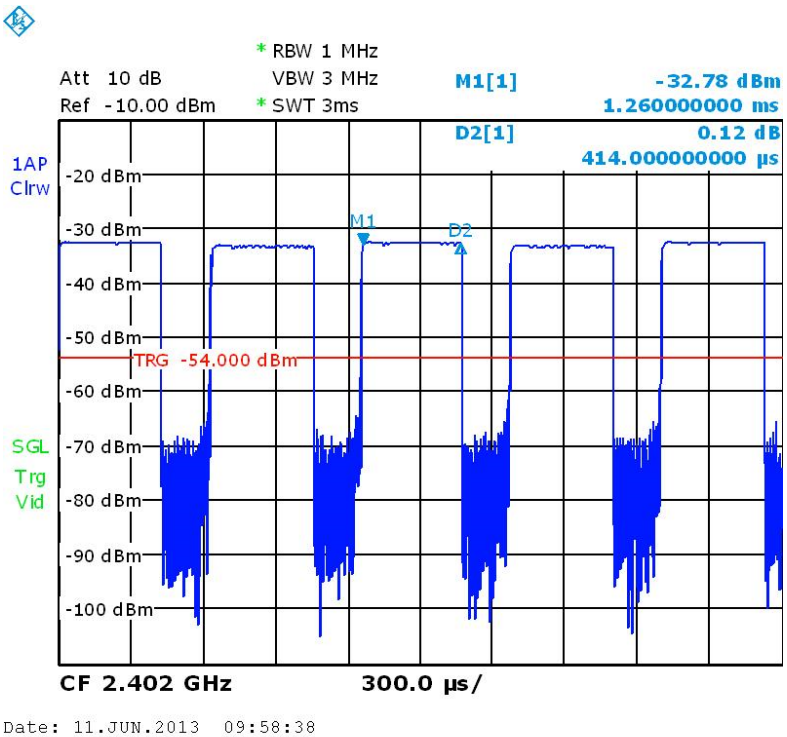
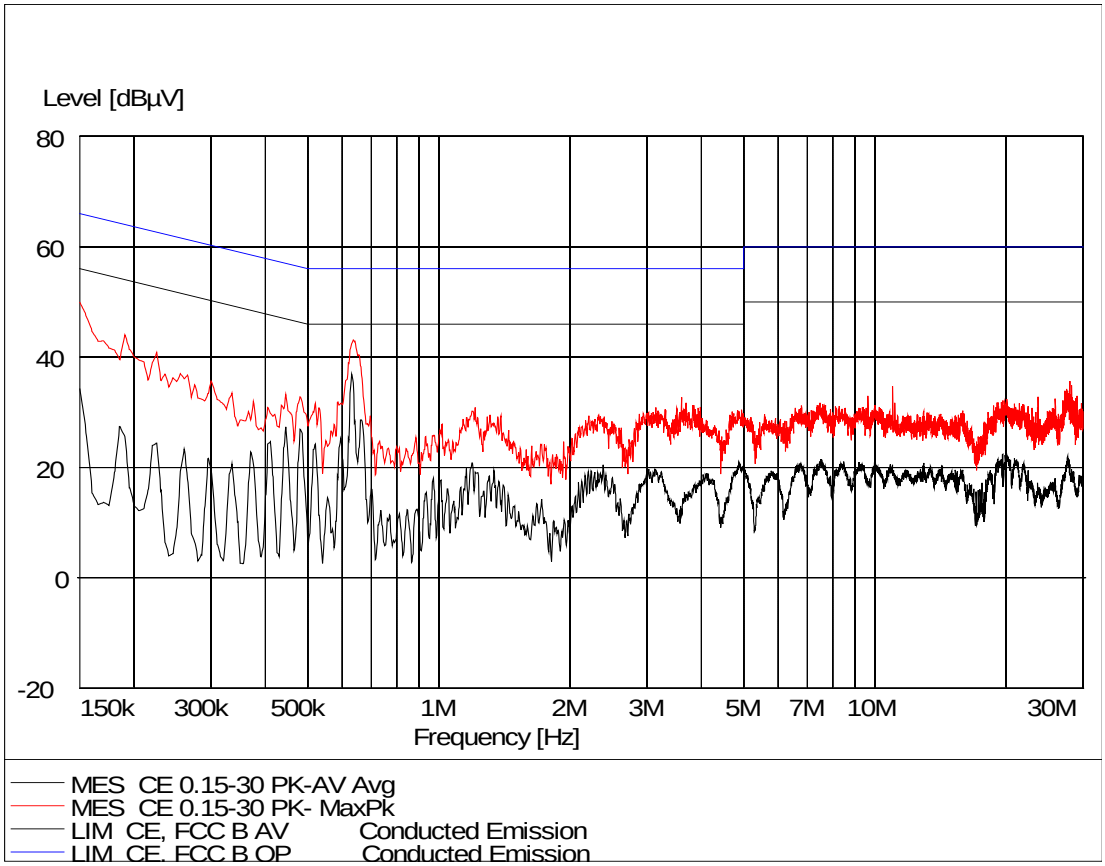



Photo 4.2.2 Test setup regarding duty cycle correction factor (δ), BT radio.

## 4.3 Measurement of radio frequency voltage on mains, GN radio

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | CE-1 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500050 | Date | 23 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 0.15-30 MHz |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Artificial mains network: 50 Ω, 50 µH | Temperature<br>Humidity | 24 °C<br>53 % RH |
| Detector | Peak and average | Bandwidth | 10 kHz |
| Test equipm. | EMC room 1 Hørsholm 29301 49421 49600 29861 | Uncertainty | 2 dB |



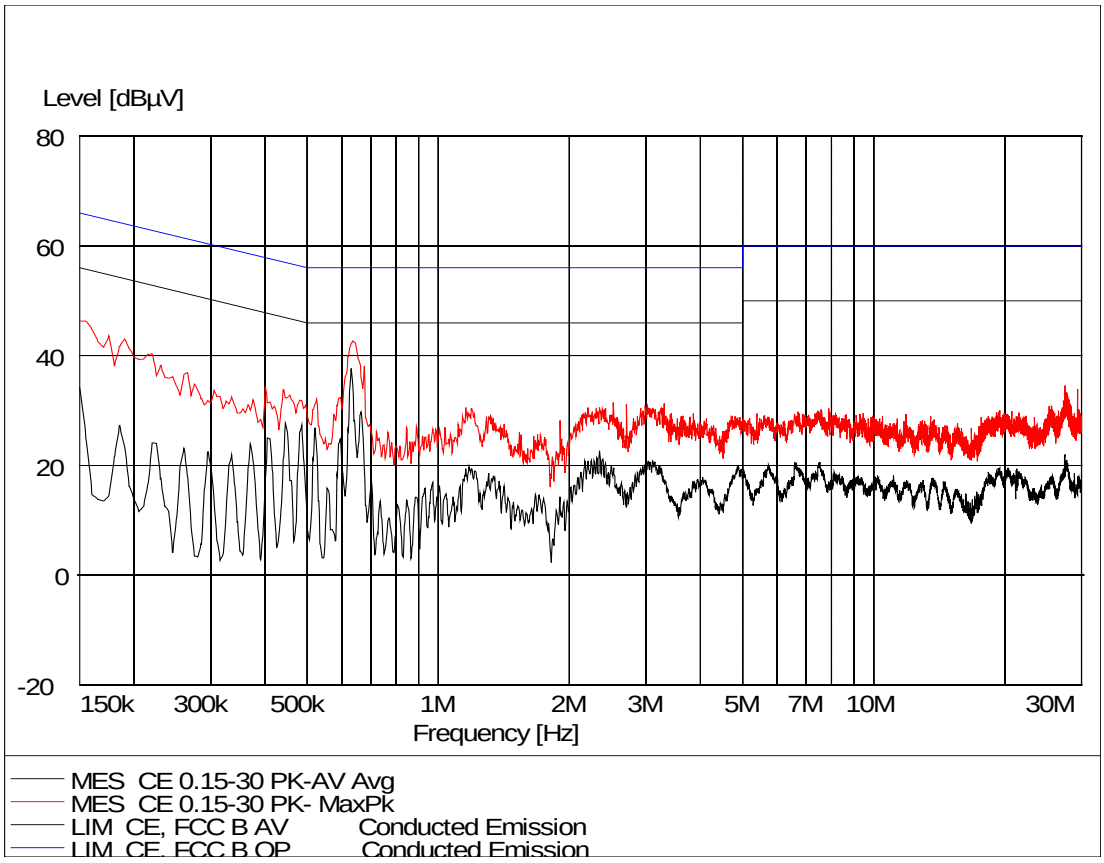

Line under test Neutral

Test result The measured voltages were below the limit

Comments Mains voltage: 120 VAC

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | CE-2 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500050 | Date | 23 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 0.15-30 MHz |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Artificial mains network: 50 Ω, 50 µH | Temperature<br>Humidity | 24 °C<br>53 % RH |
| Detector | Peak and average | Bandwidth | 10 kHz |
| Test equipm. | EMC room 1 Hørsholm 29301 49421 49600 29861 | Uncertainty | 2 dB |




| | |
|---|---|
| Line under test | Line |
| Test result | The measured voltages were below the limit |
| Compliant | Yes |
| Comments | Mains voltage: 120 VAC |

Photo 4.3.1 Test setup regarding measurement of radio frequency voltage on mains.

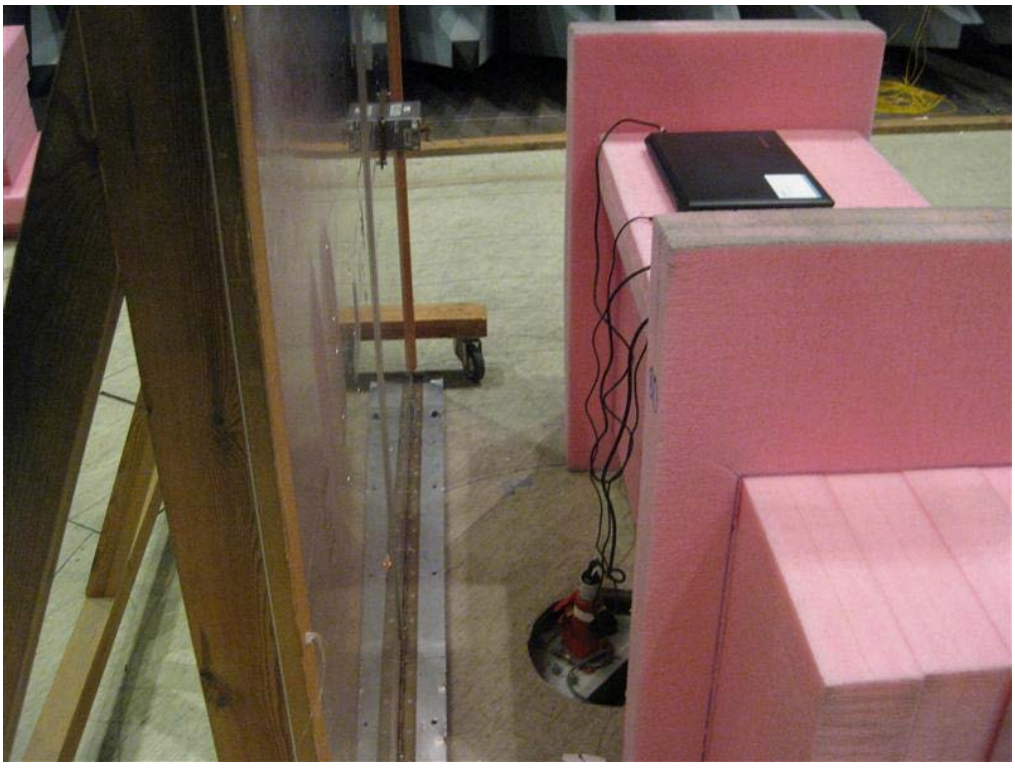
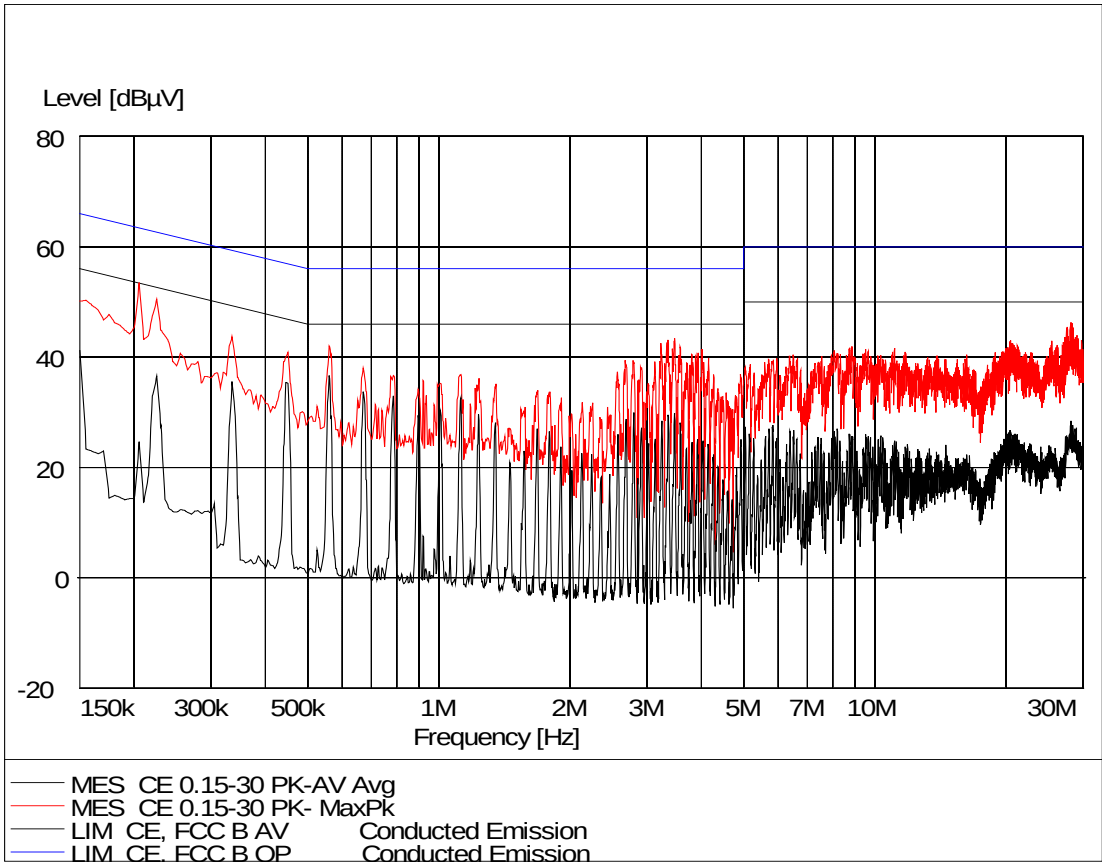


Photo 4.3.2 Test setup regarding measurement of radio frequency voltage on mains.

## 4.4 Measurement of radio frequency voltage on mains, BT radio

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | CE-3 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500013 | Date | 23 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 0.15-30 MHz |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Artificial mains network: 50 Ω, 50 µH | Temperature<br>Humidity | 24 °C<br>53 % RH |
| Detector | Peak and average | Bandwidth | 10 kHz |
| Test equipm. | EMC room 1 Hørsholm 29301 49421 49600 29861 | Uncertainty | 2 dB |



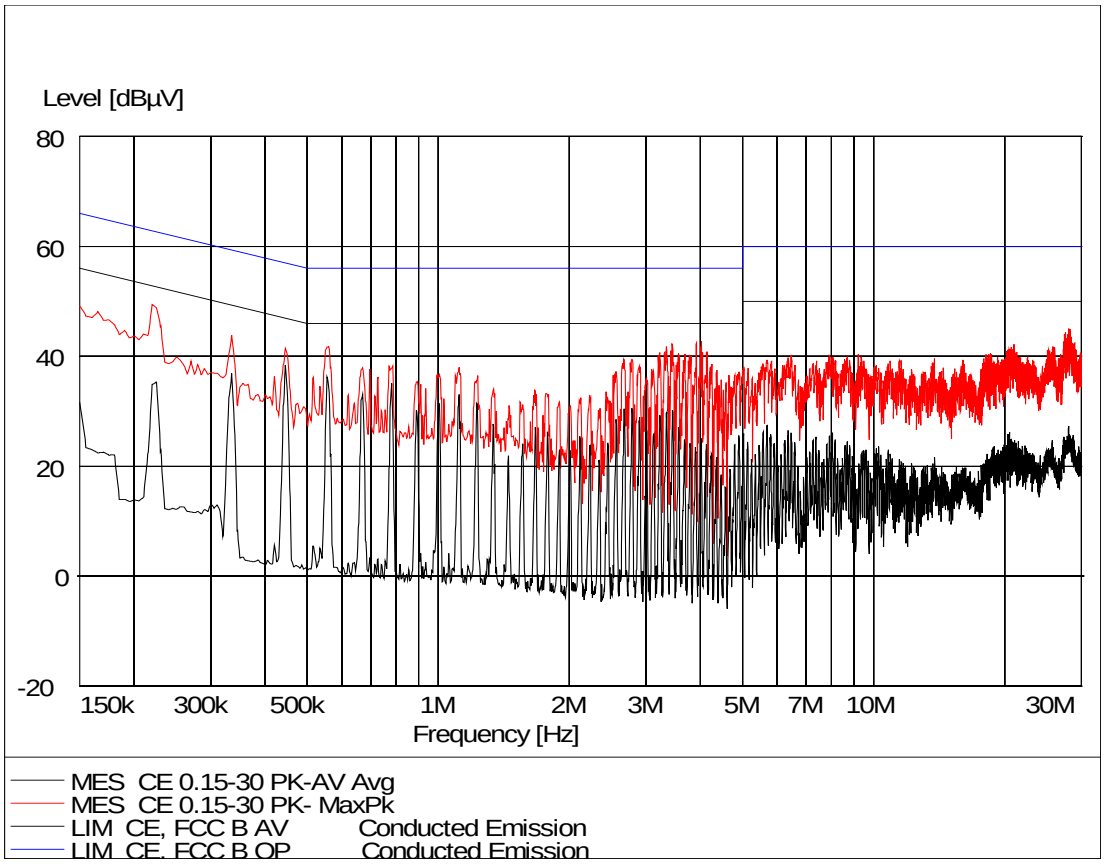

Line under test Neutral

Test result The measured voltages were below the limit

Comments Mains voltage: 120 VAC

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | CE-4 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500013 | Date | 23 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 0.15-30 MHz |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Artificial mains network: 50 Ω, 50 µH | Temperature<br>Humidity | 24 °C<br>53 % RH |
| Detector | Peak and average | Bandwidth | 10 kHz |
| Test equipm. | EMC room 1 Hørsholm 29301 49421 49600 29861 | Uncertainty | 2 dB |




| | |
|---|---|
| Line under test | Line |
| Test result | The measured voltages were below the limit |
| Compliant | Yes |
| Comments | Mains voltage: 120 VAC |

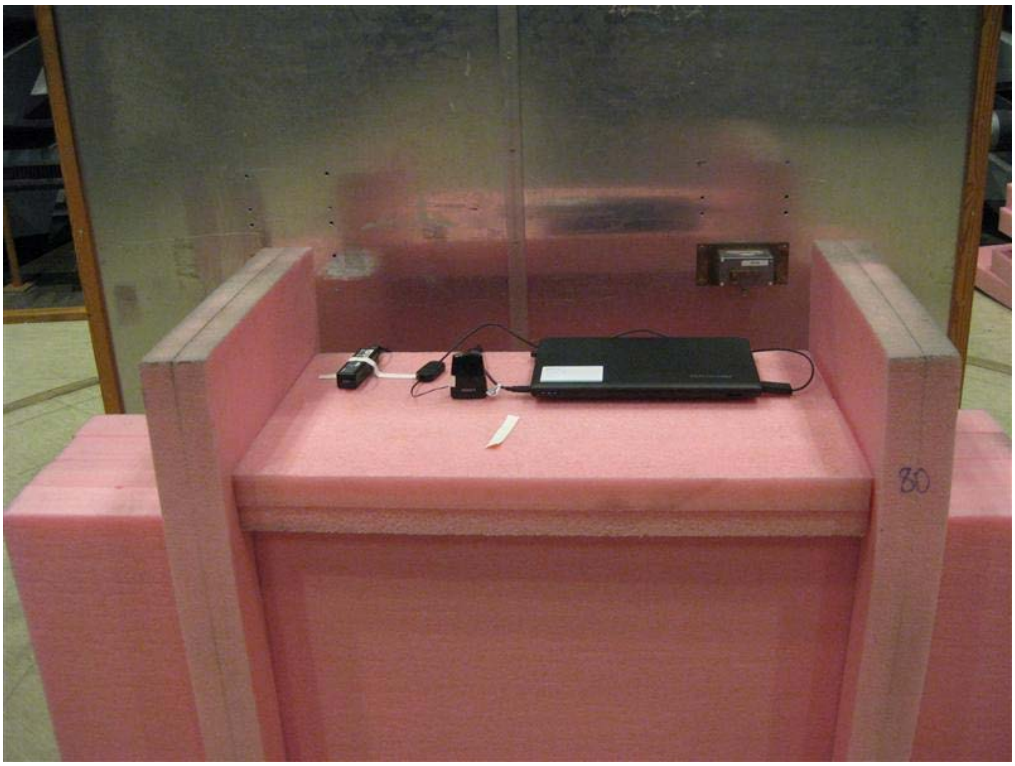


Photo 4.4.1 Test setup regarding measurement of radio frequency voltage on mains.

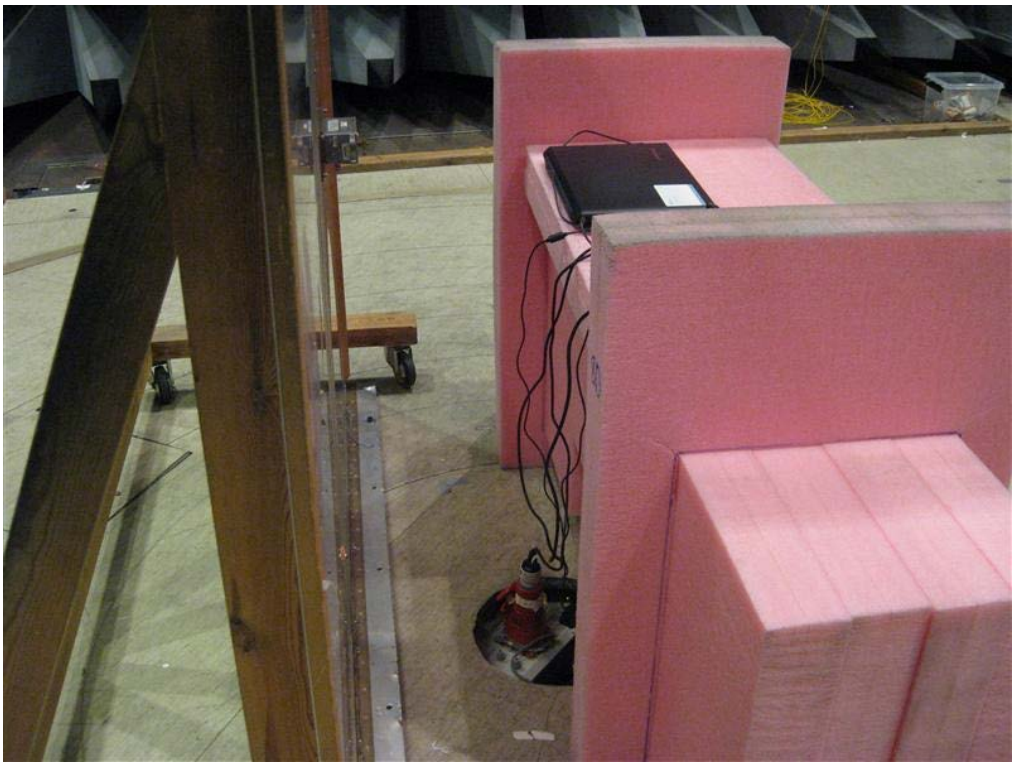
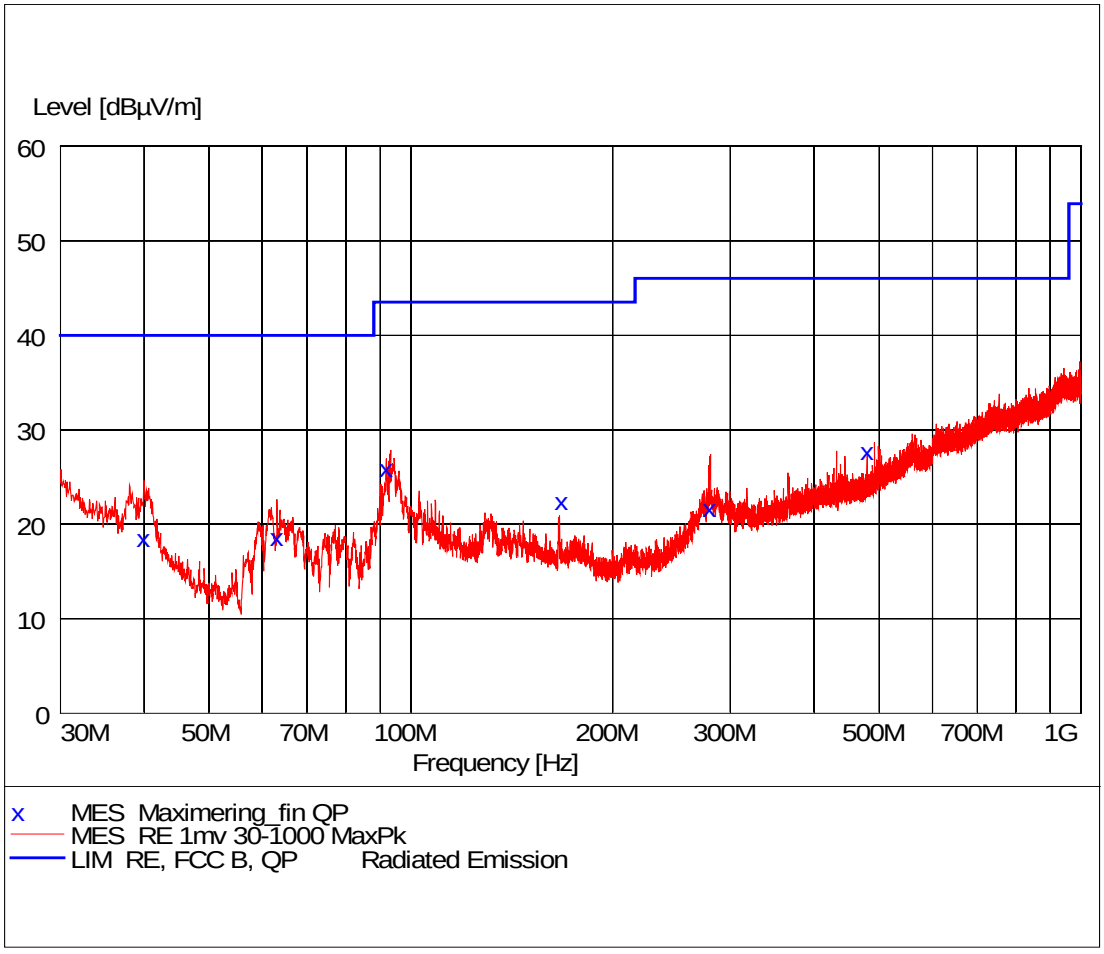


Photo 4.4.2 Test setup regarding measurement of radio frequency voltage on mains.

## 4.5 Measurement of radiated emission below 1 GHz, GN radio

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-1 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500050 | Date | 23 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 30-1000 MHz |

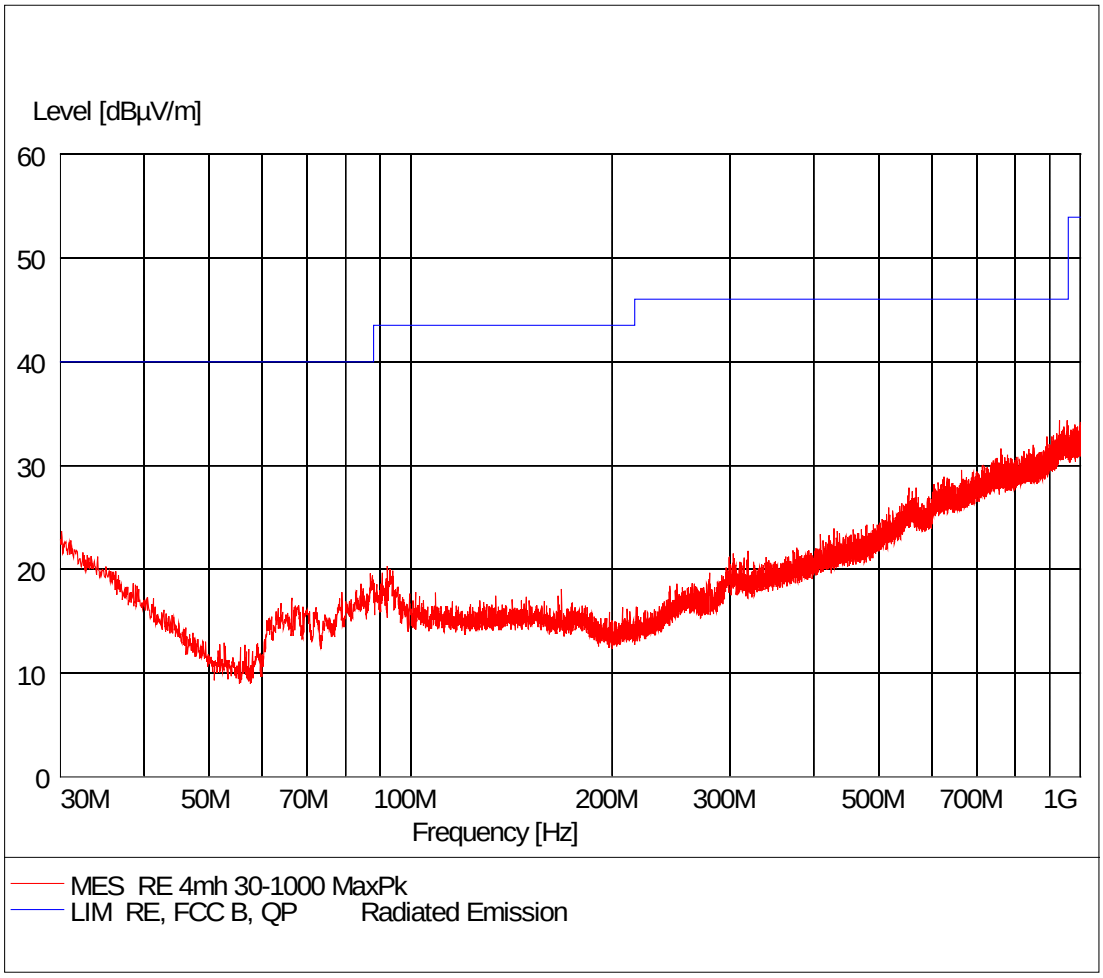
| | | | |
|---|---|---|---|
| Test method | ANSI C63.10:2009 | Temperature | 24 °C |
| Characteristics | Pre-scan, Antenna at 3 m, 1 m height, vert. pol. | Humidity | 53 % RH |
| Detector | Peak and quasi peak | Bandwidth | 120 kHz |
| Test equipm. | EMI room Hørsholm 29861 49600 29797 | Uncertainty | 4.9 dB |




Comments: Continuous Tx - normal modulation - hopping between low, mid and high operating freq.

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-2 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500050 | Date | 23 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 30-1000 MHz |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Pre-scan, Antenna at 3 m, 4 m height, hor. pol. | Temperature<br>Humidity | 24 °C<br>53 % RH |
| Detector | Peak | Bandwidth | 120 kHz |
| Test equipm. | EMI room Hørsholm 29861 49600 29797 | Uncertainty | 4.9 dB |




Comments: Continuous Tx - normal modulation - hopping between low, mid and high operating freq.

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-3 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500050 | Date | 23 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 30-1000 MHz |

| | | | |
|---|---|---|---|
| Test method | ANSI C63.10:2009 | Temperature | 24 °C |
| Characteristics | Peak search ant. at 3 m, height: 1-4 m, v/h pol. | Humidity | 53 % RH |
| Detector | Quasi peak | Bandwidth | 120 kHz |
| Test equipm. | EMI room Hørsholm 29861 49600 29797 | Uncertainty | 4.9 dB |

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Height cm | Azimuth deg | Polarisation |
|---|---|---|---|---|---|---|---|
| 39.960000 | 18.70 | 15.4 | 40.0 | 21.3 | 101.0 | 132.00 | VERTICAL |
| 63.120000 | 18.80 | 8.2 | 40.0 | 21.2 | 105.0 | 256.00 | VERTICAL |
| 91.980000 | 26.10 | 12.1 | 43.5 | 17.4 | 117.0 | 1.00 | VERTICAL |
| 168.000000 | 22.60 | 13.3 | 43.5 | 20.9 | 101.0 | 64.00 | HORIZONTAL |
| 279.000000 | 21.90 | 16.1 | 46.0 | 24.1 | 101.0 | 349.00 | VERTICAL |
| 480.000000 | 27.90 | 21.2 | 46.0 | 18.1 | 144.0 | 149.00 | HORIZONTAL |

Test result — The measured field strengths were below the limit

Test Port — Enclosure

Test frequency — 2404/2441/2478 MHz

Test mode — Continuous Tx - normal modulation - hopping between low, mid and high operating freq.

Condition — Normal

Compliant — Yes

Comments — Final maximal measurements by variation of turntable azimuth, antenna height, and antenna polarisation.

Test voltage: Powered through USB port by AUX PC

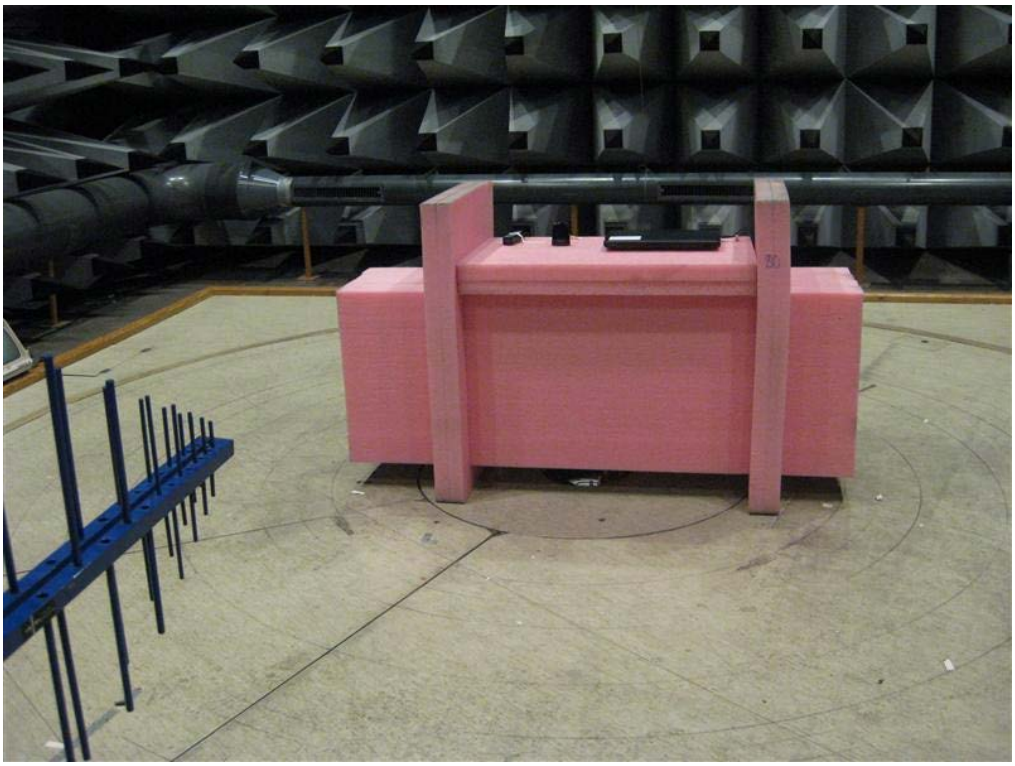


Photo 4.5.1 Test setup regarding measurement of radiated emission below 1 GHz.

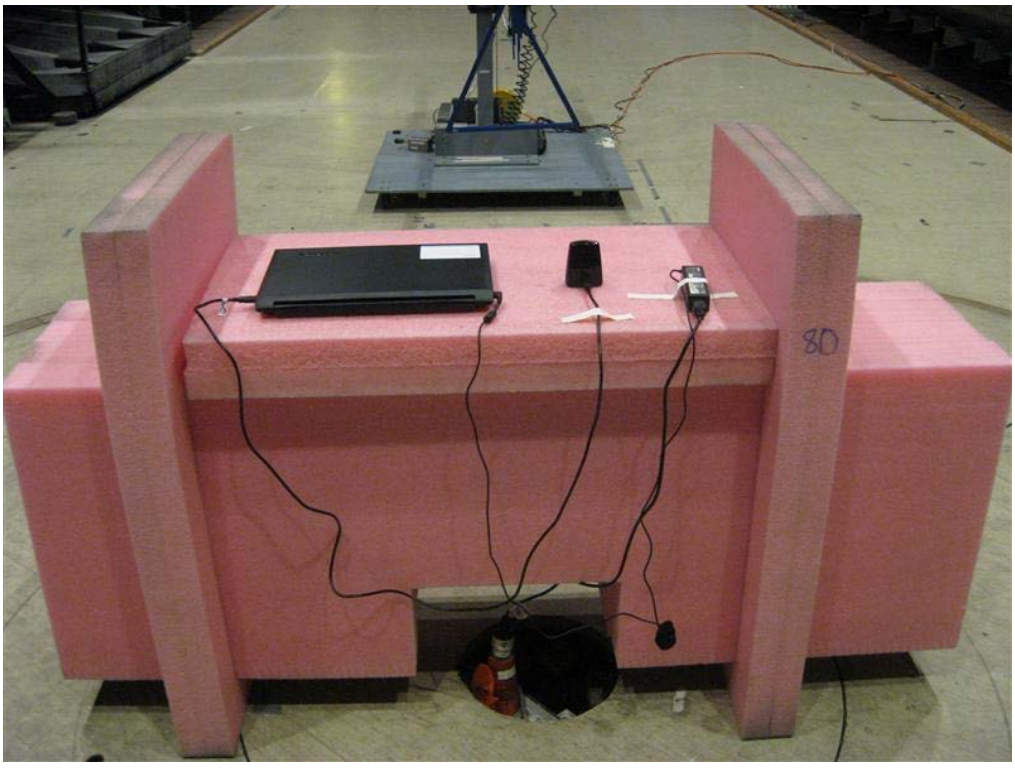
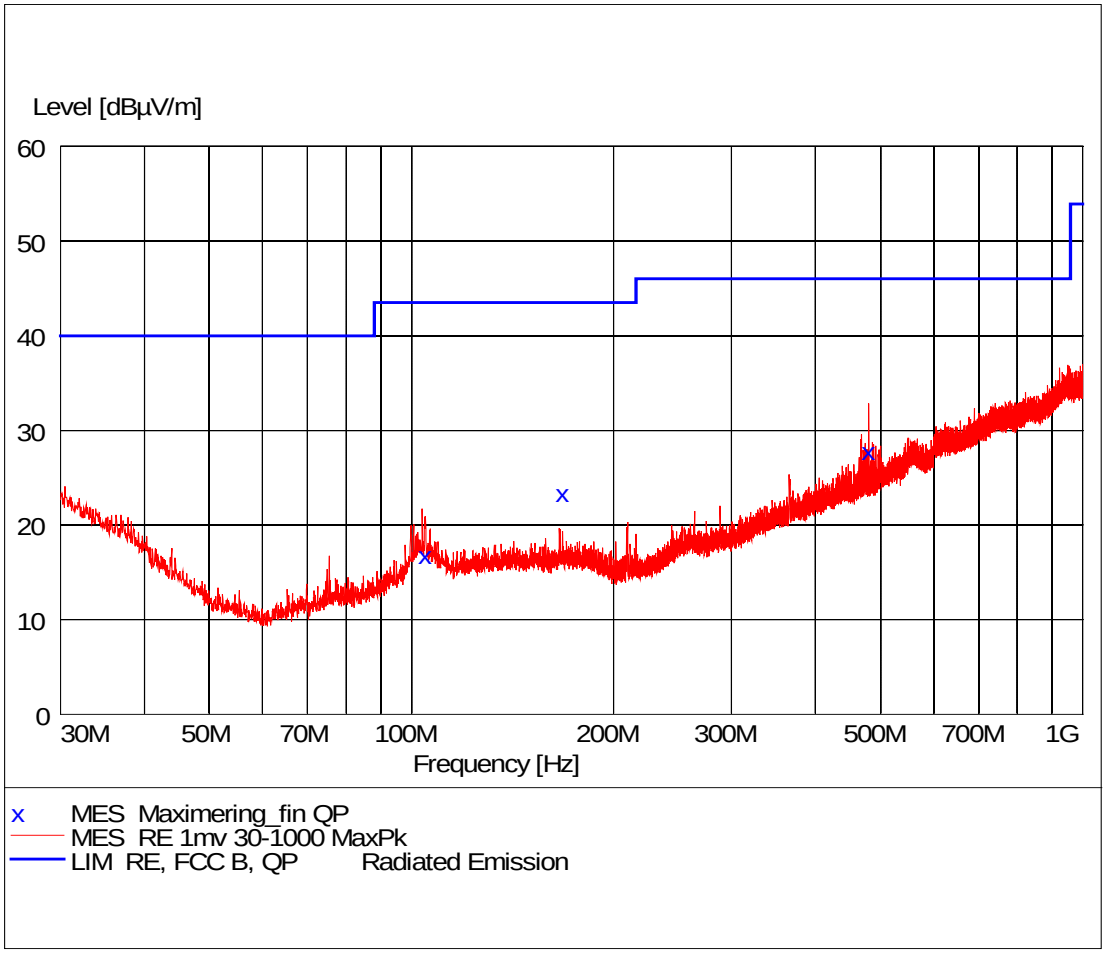


Photo 4.5.2 Test setup regarding measurement of radiated emission below 1 GHz.

## 4.6 Measurement of radiated emission below 1 GHz, Bluetooth radio 2402 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-4 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500013 | Date | 28 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 30-1000 MHz |

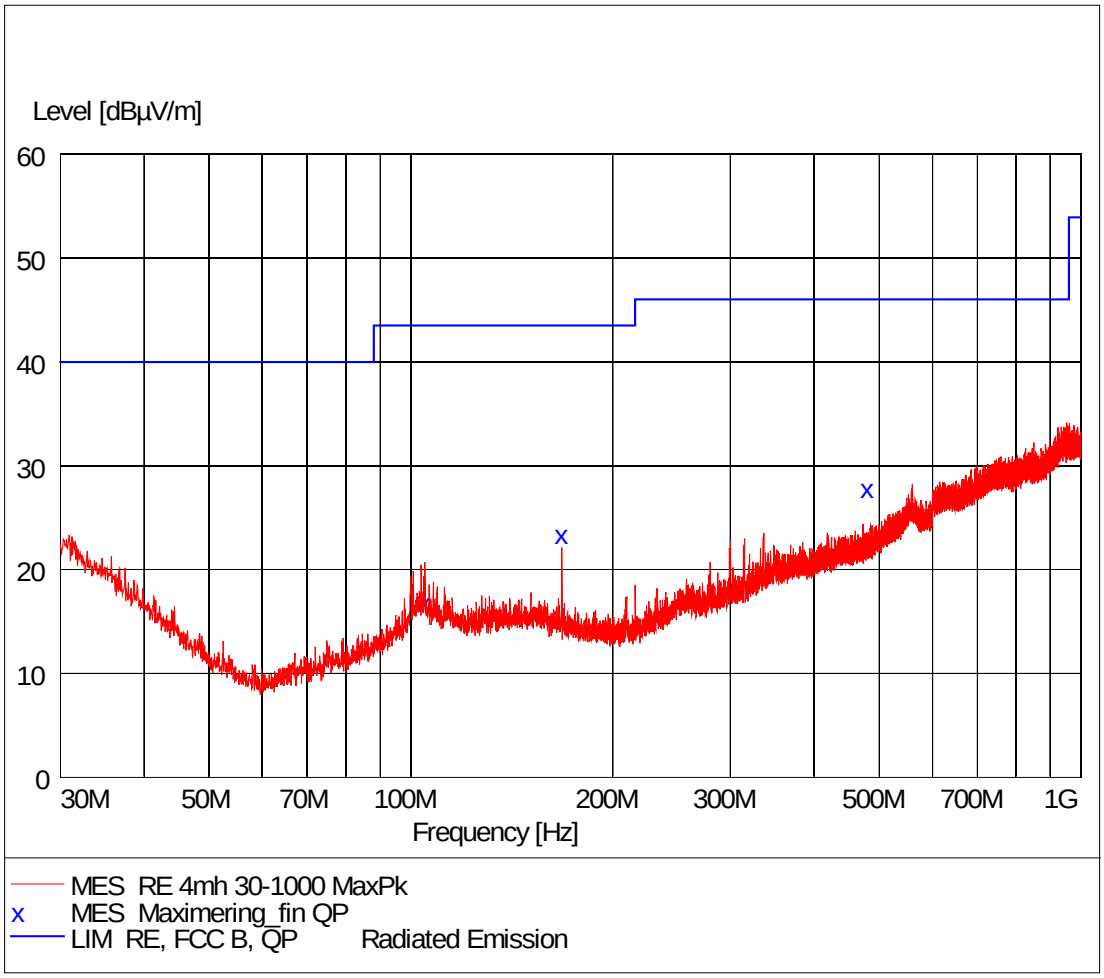
| | | | |
|---|---|---|---|
| Test method | ANSI C63.10:2009 | Temperature | 22 °C |
| Characteristics | Pre-scan, antenna at 3 m, 1 m height, vert. pol. | Humidity | 56 % RH |
| Detector | Peak and quasi peak | Bandwidth | 120 kHz |
| Test equipm. | EMI room Hørsholm 29861 49600 29797 | Uncertainty | 4.9 dB |




Comments Continuous Tx - GFSK modulation - hopping off

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-5 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500013 | Date | 28 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 30-1000 MHz |

| | | | |
|---|---|---|---|
| Test method | ANSI C63.10:2009 | Temperature | 22 °C |
| Characteristics | Pre-scan, antenna at 3 m, 4 m height, hor. pol. | Humidity | 56 % RH |
| Detector | Peak and quasi peak | Bandwidth | 120 kHz |
| Test equipm. | EMI room Hørsholm 29861 49600 29797 | Uncertainty | 4.9 dB |




Comments Continuous Tx - GFSK modulation - hopping off

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-6 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500013 | Date | 28 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 30-1000 MHz |

| | | | |
|---|---|---|---|
| Test method | ANSI C63.10:2009 | Temperature | 24 °C |
| Characteristics | Peak search ant. at 3 m, height: 1-4 m, v/h pol. | Humidity | 56 % RH |
| Detector | Quasi peak | Bandwidth | 120 kHz |
| Test equipm. | EMI room Hørsholm 29861 49600 29797 | Uncertainty | 4.9 dB |

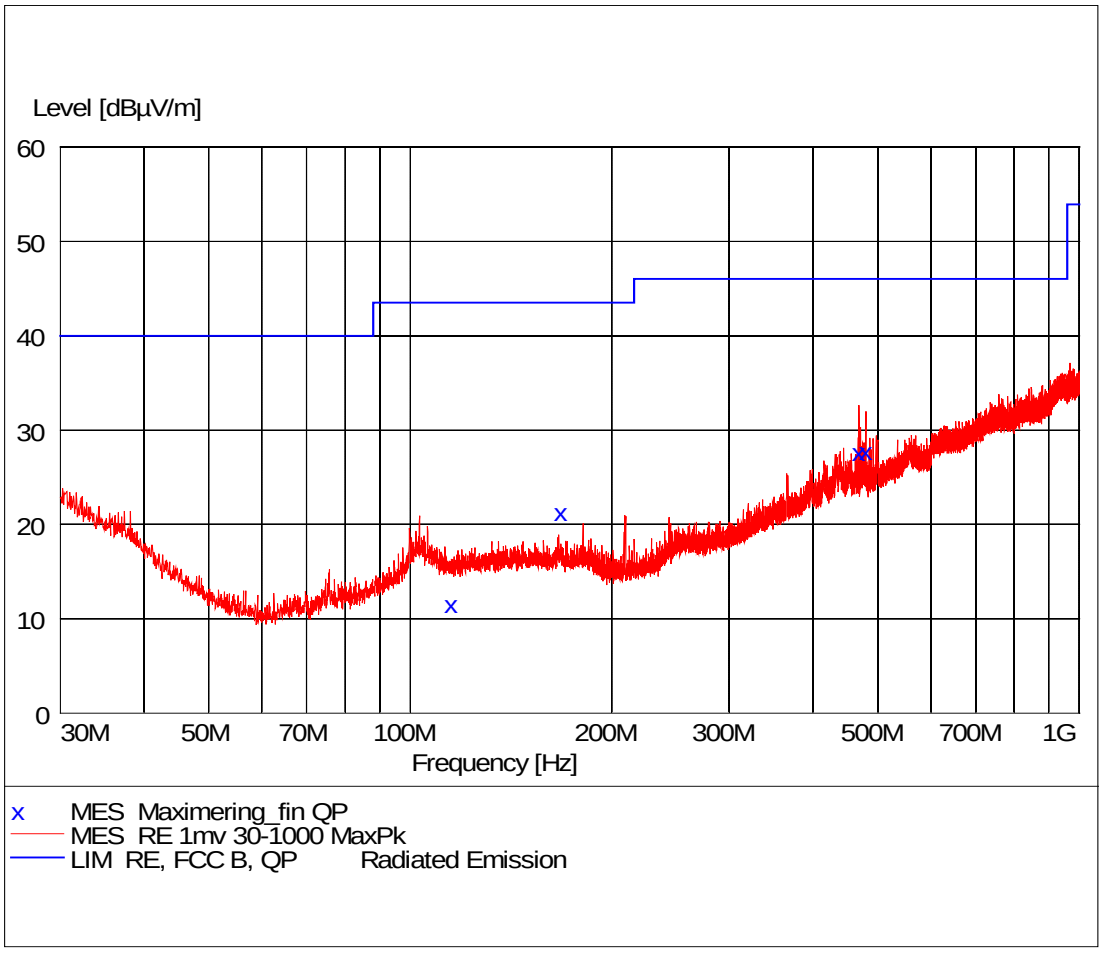
| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Height cm | Azimuth deg | Polarisation |
|---|---|---|---|---|---|---|---|
| 104.940000 | 17.00 | 13.4 | 43.5 | 26.5 | 101.0 | 341.00 | VERTICAL |
| 168.000000 | 23.60 | 13.3 | 43.5 | 19.9 | 172.0 | 71.00 | HORIZONTAL |
| 480.010000 | 28.00 | 21.2 | 46.0 | 18.0 | 105.0 | 9.00 | VERTICAL |

| | |
|---|---|
| Test result | The measured field strengths were below the limit |
| Test Port | Enclosure |
| Test frequency | 2402 MHz |
| Test mode | Continuous Tx - GFSK modulation - hopping off |
| Condition | Normal |
| Compliant | Yes |
| Comments | Final maximal measurements by variation of turntable azimuth, antenna height, and antenna polarisation.<br>Test voltage: Powered through USB port by AUX PC |

## 4.7 Measurement of radiated emission below 1 GHz, Bluetooth radio 2440 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-7 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500013 | Date | 28 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 30-1000 MHz |

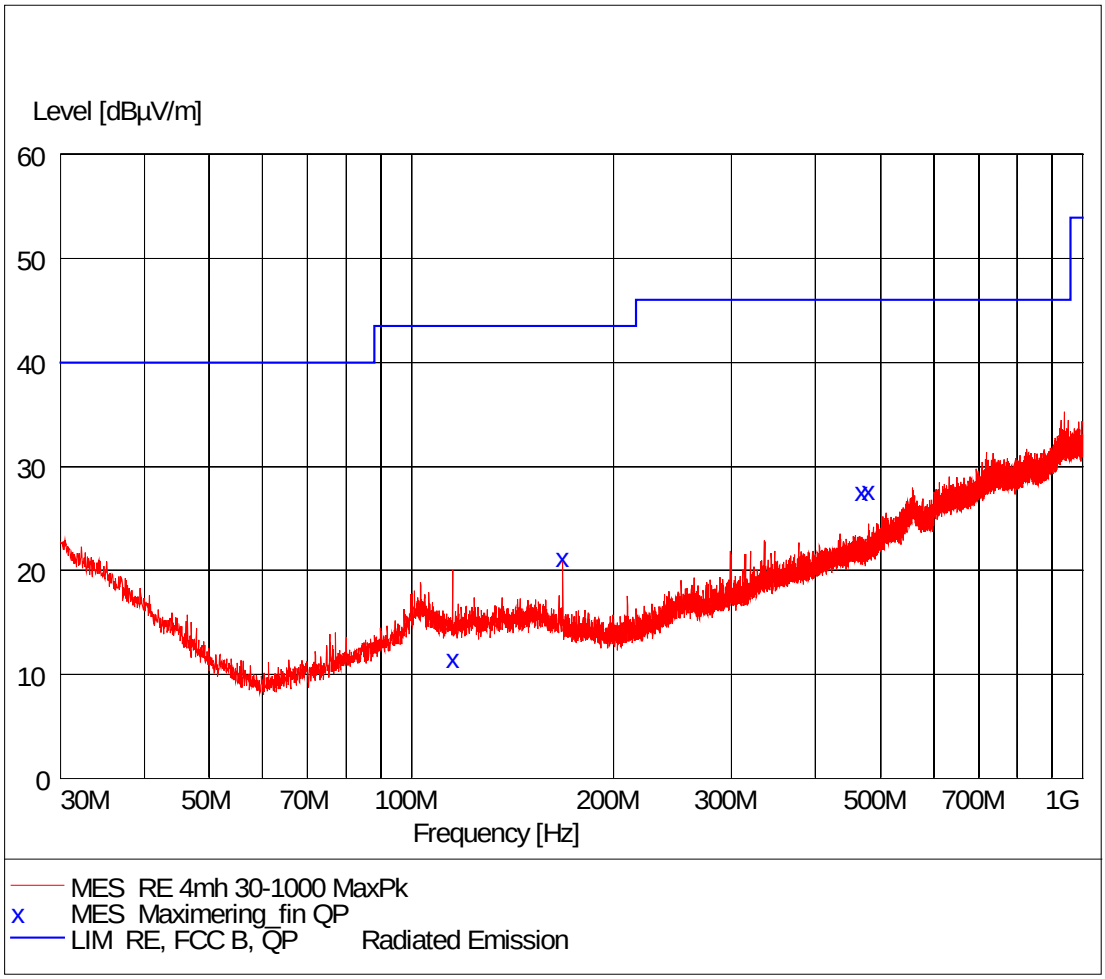
| | | | |
|---|---|---|---|
| Test method | ANSI C63.10:2009 | Temperature | 22 °C |
| Characteristics | Pre-scan, Antenna at 3 m, 1 m height, vert. pol. | Humidity | 56 % RH |
| Detector | Peak and quasi peak | Bandwidth | 120 kHz |
| Test equipm. | EMI room Hørsholm 29861 49600 29797 | Uncertainty | 4.9 dB |




Comments Continuous Tx - GFSK modulation - hopping off

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-8 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500013 | Date | 28 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 30-1000 MHz |

| | | | |
|---|---|---|---|
| Test method | ANSI C63.10:2009 | Temperature | 22 °C |
| Characteristics | Pre-scan, antenna at 3 m, 4 m height, hor. pol. | Humidity | 56 % RH |
| Detector | Peak and quasi peak | Bandwidth | 120 kHz |
| Test equipm. | EMI room Hørsholm 29861 49600 29797 | Uncertainty | 4.9 dB |




Comments Continuous Tx - GFSK modulation - hopping off

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-9 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500013 | Date | 28 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 30-1000 MHz |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Peak search ant. at 3 m, height: 1-4 m, v/h pol. | Temperature<br>Humidity | 24 °C<br>56 % RH |
| Detector | Quasi peak | Bandwidth | 120 kHz |
| Test equipm. | EMI room Hørsholm 29861 49600 29797 | Uncertainty | 4.9 dB |

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Height cm | Azimuth deg | Polarisation |
|---|---|---|---|---|---|---|---|
| 115.260000 | 11.70 | 14.0 | 43.5 | 31.8 | 101.0 | 168.00 | VERTICAL |
| 168.000000 | 21.50 | 13.3 | 43.5 | 22.0 | 101.0 | 59.00 | HORIZONTAL |
| 468.000000 | 27.80 | 21.0 | 46.0 | 18.2 | 101.0 | 20.00 | VERTICAL |
| 480.010000 | 27.90 | 21.2 | 46.0 | 18.1 | 101.0 | 9.00 | VERTICAL |

Test result: The measured field strengths were below the limit

Test Port: Enclosure

Test frequency: 2440 MHz

Test mode: Continuous Tx - GFSK modulation - hopping off

Condition: Normal

Compliant: Yes

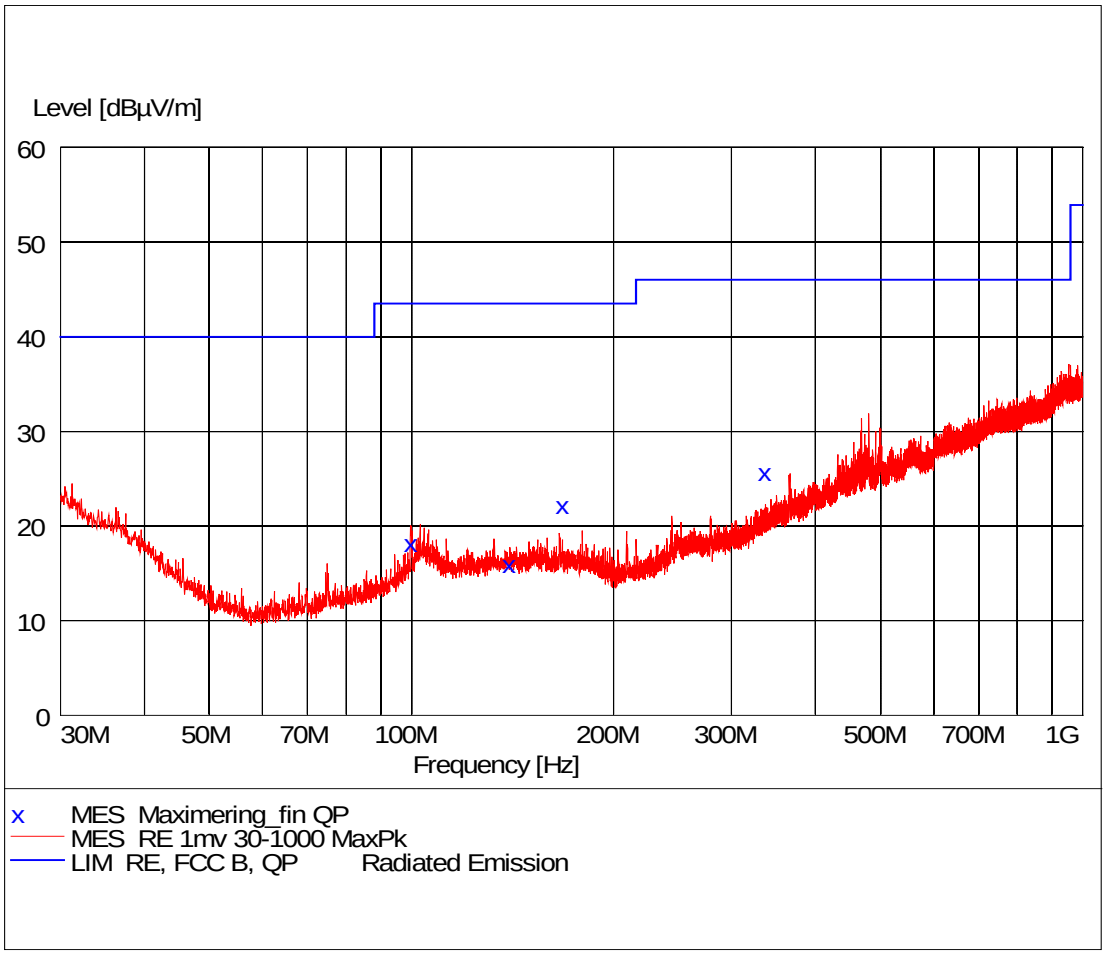
Comments: Final maximal measurements by variation of turntable azimuth, antenna height, and antenna polarisation.

Test voltage: Powered through USB port by AUX PC

## 4.8 Measurement of radiated emission below 1 GHz, Bluetooth radio 2480 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-10 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500013 | Date | 28 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 30-1000 MHz |

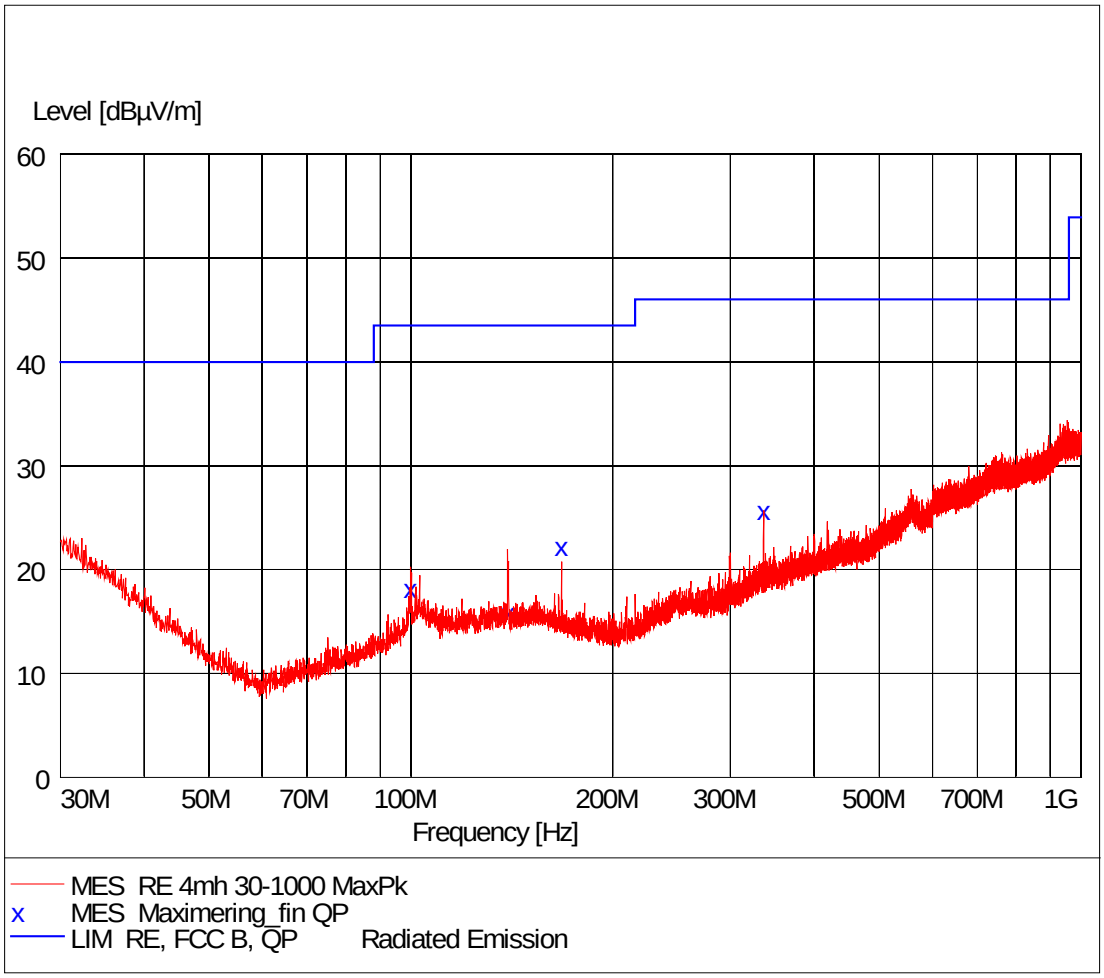
| | | | |
|---|---|---|---|
| Test method | ANSI C63.10:2009 | Temperature | 22 °C |
| Characteristics | Pre-scan, antenna at 3 m, 1 m height, vert. pol. | Humidity | 56 % RH |
| Detector | Peak and quasi peak | Bandwidth | 120 kHz |
| Test equipm. | EMI room Hørsholm 29861 49600 29797 | Uncertainty | 4.9 dB |




Comments Continuous Tx - GFSK modulation - hopping off

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-11 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500013 | Date | 28 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 30-1000 MHz |

| | | | |
|---|---|---|---|
| Test method | ANSI C63.10:2009 | Temperature | 22 °C |
| Characteristics | Pre-scan, antenna at 3 m, 4 m height, hor. pol. | Humidity | 56 % RH |
| Detector | Peak and quasi peak | Bandwidth | 120 kHz |
| Test equipm. | EMI room Hørsholm 29861 49600 29797 | Uncertainty | 4.9 dB |




Comments Continuous Tx - GFSK modulation - hopping off

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-12 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500013 | Date | 28 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 30-1000 MHz |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Peak search ant. at 3 m, height: 1-4 m, v/h pol. | Temperature<br>Humidity | 24 °C<br>56 % RH |
| Detector | Quasi peak | Bandwidth | 120 kHz |
| Test equipm. | EMI room Hørsholm 29861 49600 29797 | Uncertainty | 4.9 dB |

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Height cm | Azimuth deg | Polarisation |
|---|---|---|---|---|---|---|---|
| 99.960000 | 18.40 | 13.0 | 43.5 | 25.1 | 200.0 | 40.00 | HORIZONTAL |
| 139.920000 | 16.10 | 14.6 | 43.5 | 27.4 | 211.0 | 9.00 | HORIZONTAL |
| 168.000000 | 22.40 | 13.3 | 43.5 | 21.1 | 171.0 | 66.00 | HORIZONTAL |
| 336.000000 | 25.90 | 17.8 | 46.0 | 20.1 | 101.0 | 239.00 | HORIZONTAL |

| | |
|---|---|
| Test result | The measured field strengths were below the limit |
| Test Port | Enclosure |
| Test frequency | 2480 MHz |
| Test mode | Continuous Tx - GFSK modulation - hopping off |
| Condition | Normal |
| Compliant | Yes |
| Comments | Final maximal measurements by variation of turntable azimuth, antenna height, and antenna polarisation.<br>Test voltage: Powered through USB port by AUX PC |

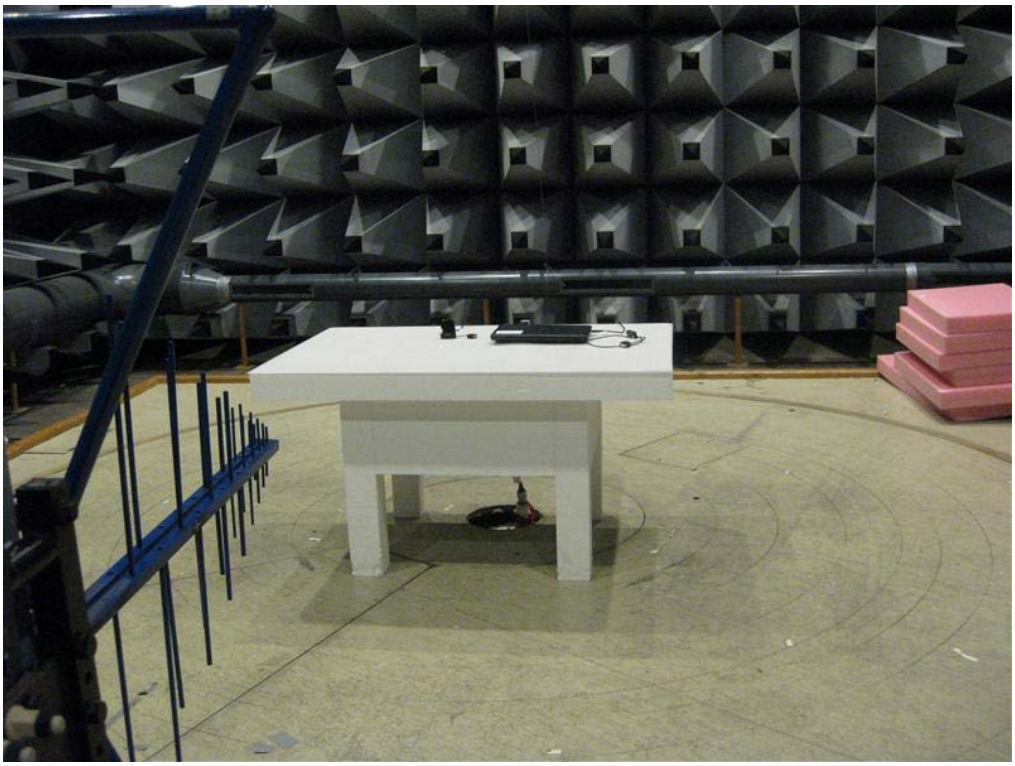


Photo 4.8.1 Test setup regarding measurement of radiated emission below 1 GHz.

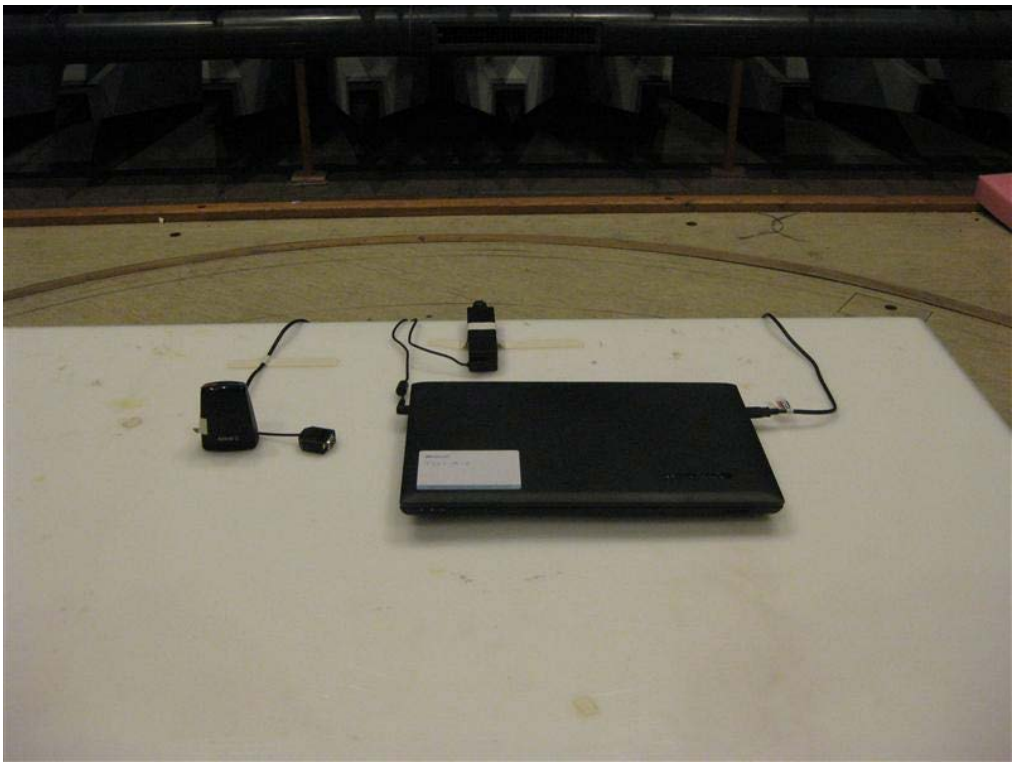
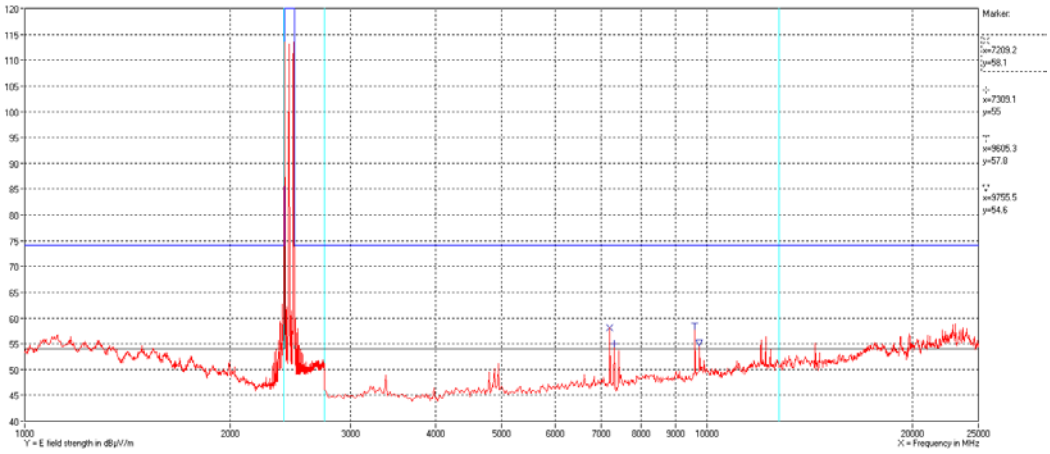


Photo 4.8.2 Test setup regarding measurement of radiated emission below 1 GHz.

## 4.9 Measurement of radiated emission above 1 GHz, GN radio

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-13 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500050 | Date | 06 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 1-25 GHz |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Complete search, antenna distance 3 m | Temperature<br>Humidity | 24 °C<br>49 % RH |
| Detector | Peak for 1 GHz to 25 GHz | Bandwidth | 1 MHz |
| Test equipm. | EMI room Hørsholm 49086 49600 49624 49625 | Uncertainty | 4.9 dB |



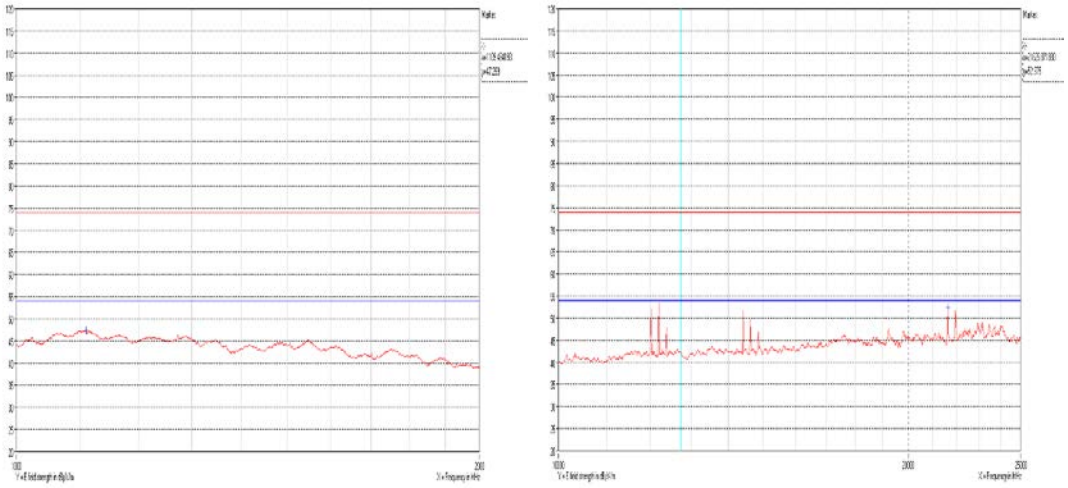

Polarization: Vertical and horizontal peak measurements

Comments: Continuous Tx - normal modulation - hopping between low, mid and high operating freq.

In the frequency range below 2 GHz and above 10 GHz, the peak noise floor is above the 54 dBµV/m average limit and this peak noise floor is generated by the measurement setup.
Measured with 1 MHz video BW.

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-14 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500050 | Date | 22 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 1-12.75 GHz |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Complete search, antenna distance 3 m | Temperature<br>Humidity | 24 °C<br>49 % RH |
| Detector | Peak for 1 GHz to 12.75 GHz | Bandwidth | 1 MHz |
| Test equipm. | EMI room Hørsholm 49086 49600 49624 49625 | Uncertainty | 4.9 dB |



Polarization: Vertical and horizontal peak measurements

Comments: Continuous Tx - normal modulation - hopping between low, mid and high operating freq.

Measured with 30 kHz Video BW to reduce the noise floor and show that no relevant levels of harmonics are present below 2 GHz and above 10 GHz.

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-15 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500050 | Date | 06 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 1-25 GHz |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Complete search, antenna distance 3 m. | Temperature<br>Humidity | 24 °C<br>54 % RH |
| Detector | Peak for 1 GHz to 25 GHz | Bandwidth | 1 MHz |
| Test equipm. | EMI room Hørsholm 49086 49600 49624 49625 | Uncertainty | 4.9 dB |

| Frequency [MHz] | Peak measurement [dBµV/m] | Peak limit [dBµV/m] | DCCF (δ) [dB] | Corrected average measurement [dBµV/m] | Average limit [dBµV/m] | Remarks |
|---|---|---|---|---|---|---|
| 7209.2 | 58.1 | 74 | -19.5 | 38.6 | 54 | Passed |
| 7309.1 | 55.0 | 74 | -19.5 | 35.5 | 54 | Passed |
| 9605.3 | 57.8 | 74 | -19.5 | 38.3 | 54 | Passed |
| 9755.5 | 54.6 | 74 | -19.5 | 35.1 | 54 | Passed |
| 12017 | 55.6 | 74 | -19.5 | 36.1 | 54 | Passed |
| 12201 | 56.4 | 74 | -19.5 | 36.9 | 54 | Passed |
| 14420 | 55.2 | 74 | -19.5 | 35.7 | 54 | Passed |

Test result: The measured peak field strengths were below the peak limit.
The measured peak field strengths corrected with the DCCF (δ) were below the average limit.
Corrected average: PAverage(resulting) = Ppeak + DCCF (δ).

Test Port: Enclosure

Test frequency: 2404/2441/2478 MHz

Test mode: Continuous Tx - normal modulation - hopping between low, mid and high operating freq.

Condition: Normal

Compliant: Yes

Comments: Final maximal measurements by variation of turntable azimuth, antenna height and antenna polarization.

Test voltage: Powered through USB port by AUX PC.

Photo 4.9.1 Test setup regarding measurement of radiated emission above 1 GHz.

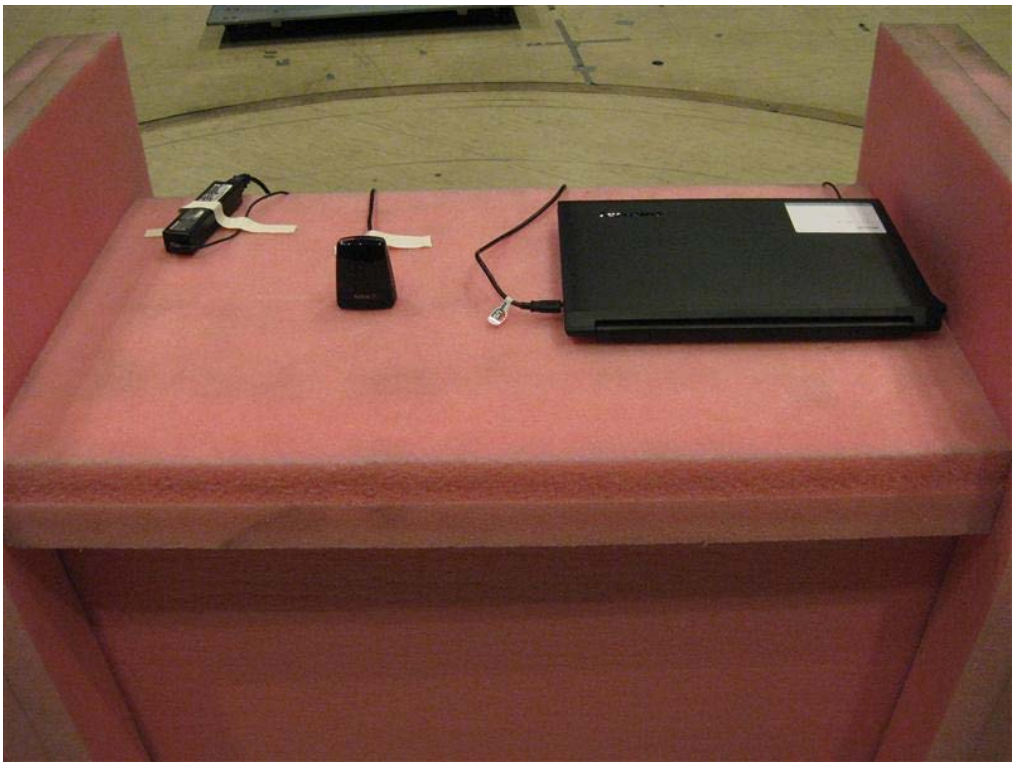
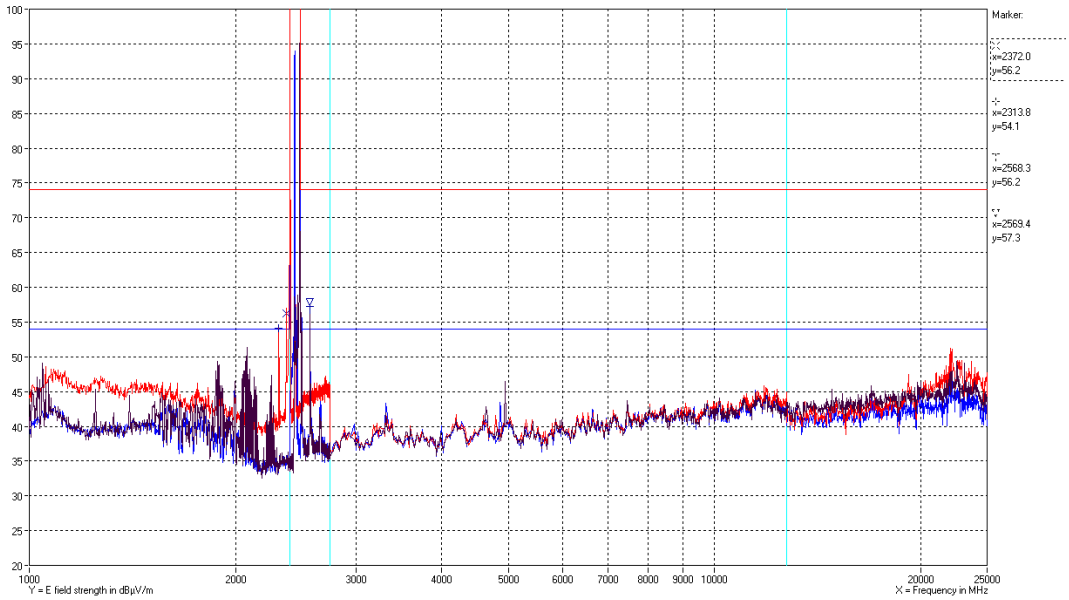


Photo 4.9.2 Test setup regarding measurement of radiated emission above 1 GHz.

## 4.10 Measurement of radiated emission above 1 GHz, Bluetooth radio

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-16 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500013 | Date | 28 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 1-25 GHz |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Complete search, antenna distance 3 m | Temperature<br>Humidity | 22 °C<br>58 % RH |
| Detector | Peak for 1 GHz to 25 GHz | Bandwidth | 1 MHz |
| Test equipm. | EMI room Hørsholm 49086 49600 49624 49625 | Uncertainty | 4.9 dB |




| | |
|---|---|
| Polarization | Vertical and horizontal peak measurements |
| Comments | Continuous Tx - GFSK modulation - hopping off<br>Red curve is 2402 MHz measurement<br>Blue curve is 2440 MHz measurement<br>Black curve is 2480 MHz measurement |

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-17 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500013 | Date | 28 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 1-25 GHz |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Complete search, antenna distance 3 m | Temperature<br>Humidity | 22 °C<br>58 % RH |
| Detector | Peak for 1 GHz to 25 GHz | Bandwidth | 1 MHz |
| Test equipm. | EMI room Hørsholm 49086 49600 49624 49625 | Uncertainty | 4.9 dB |

| Frequency [MHz] | Peak measurement [dBµV/m] | Peak limit [dBµV/m] | DCCF (δ) [dB] | Corrected average measurement [dBµV/m] | Average limit [dBµV/m] | Remarks |
|---|---|---|---|---|---|---|
| 2372 | 56.9 | 74 | -3.6 | 53.3 | 54 | Passed |
| 2314 | 54.0 | 74 | -3.6 | 50.4 | 54 | Passed |
| 2569 | 57.3 | 74 | -3.6 | 53.7 | 54 | Passed |
| 2568 | 56.2 | 74 | -3.6 | 52.6 | 54 | Passed |

Test result: The measured peak field strengths are below the peak limit.
The measured peak field strengths corrected with the DCCF (δ) are below the average limit
Corrected average: PAverage(resulting) = Ppeak + DCCF (δ).

Test Port: Enclosure

Test frequency: 2402/2440/2480 MHz

Test mode: Continuous Tx - GFSK modulation - hopping off

Condition: Normal

Compliant: Yes

Comments: Final maximal measurements by variation of turntable azimuth, antenna height and antenna polarization.

Test voltage: Powered through USB port by AUX PC.

Photo 4.10.1 Test setup regarding measurement of radiated emission above 1 GHz.

Photo 4.10.2 Test setup regarding measurement of radiated emission above 1 GHz.

## 4.11 Measurement of field strength of fundamental, GN radio

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-18 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500050 | Date | 06 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 1-25 GHz |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Complete search, antenna distance 3 m | Temperature<br>Humidity | 24 °C<br>54 % RH |
| Detector | Peak for 1 GHz to 25 GHz | Bandwidth | 1 MHz |
| Test equipm. | EMI room Hørsholm 49086 49600 49624 49625 | Uncertainty | 4.9 dB |

| Frequency [MHz] | Peak measurement [dBµV/m] | Peak limit [dBµV/m] | DCCF (δ) [dB] | Corrected average measurement [dBµV/m] | Average limit [dBµV/m] | Remarks |
|---|---|---|---|---|---|---|
| 2404 | 113.5 | 114 | -19.5 | 94 | 94 | Passed |
| 2441 | 113.1 | 114 | -19.5 | 93.6 | 94 | Passed |
| 2478 | 113.5 | 114 | -19.5 | 94 | 94 | Passed |

Test result: The measured peak field strengths were below the peak limit.
The measured peak field strengths corrected with the DCCF (δ) are below the average limit.
Corrected average: PAverage(resulting) = Ppeak + DCCF (δ).

Test Port: Enclosure

Test frequency: 2404/2441/2478 MHz

Test mode: Continuous Tx - normal modulation - hopping between low, mid and high operating freq.

Condition: Normal

Compliant: Yes

Comments: Final maximal measurements by variation of turntable azimuth, antenna height and antenna polarization.

Test voltage: Powered through USB port by AUX PC.

Photo 4.11.1 Test setup regarding measurement of field strength of fundamental.

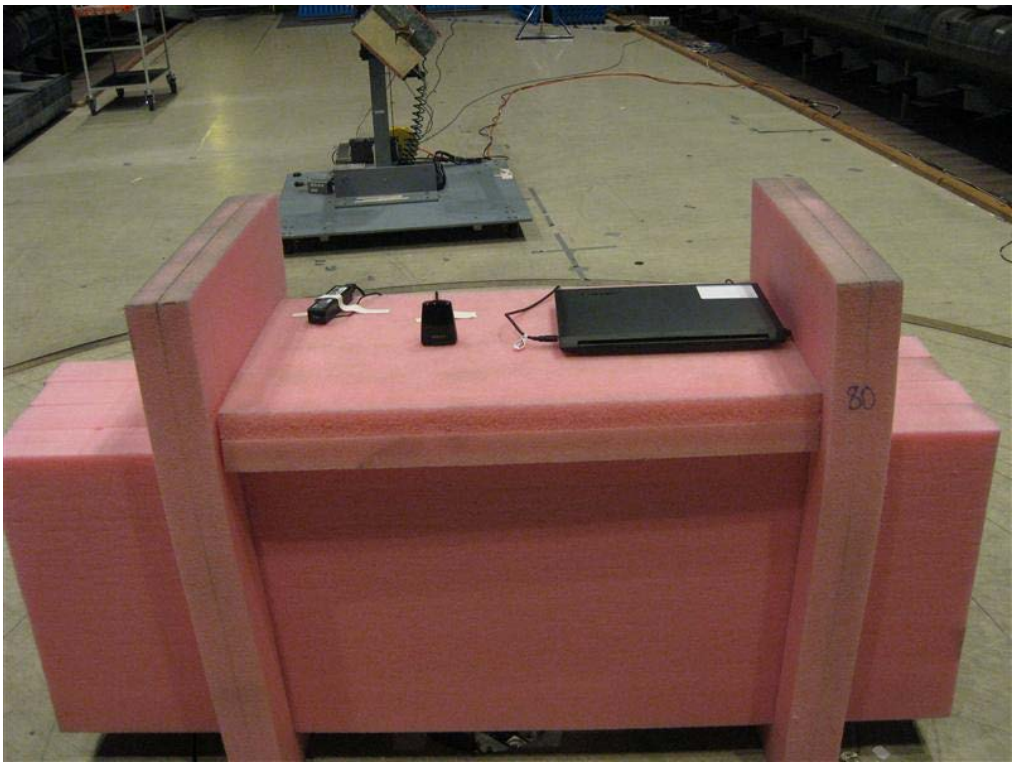


Photo 4.11.2 Test setup regarding measurement of field strength of fundamental.

## 4.12 Measurement of field strength of fundamental, BT radio

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | RE_Spur-19 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500013 | Date | 28 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 1-25 GHz |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Complete search, antenna distance 3 m | Temperature<br>Humidity | 22 °C<br>58 % RH |
| Detector | Peak for 1 GHz to 25 GHz | Bandwidth | 1 MHz |
| Test equipm. | EMI room Hørsholm 49086 49600 49624 49625 | Uncertainty | 4.9 dB |

| Frequency [MHz] | Peak measurement [dBµV/m] | Peak limit [dBµV/m] | DCCF (δ) [dB] | Corrected average measurement [dBµV/m] | Average limit [dBµV/m] | Remarks |
|---|---|---|---|---|---|---|
| 2402 | 95.1 | 114 | -3.6 | 91.5 | 94 | Passed |
| 2440 | 94.9 | 114 | -3.6 | 91.3 | 94 | Passed |
| 2480 | 95.1 | 114 | -3.6 | 91.5 | 94 | Passed |

| | |
|---|---|
| Test result | The measured peak field strengths are below the peak limit<br>The measured peak field strengths corrected with the DCCF (δ) are below the average limit<br>Corrected average: PAverage(resulting) = Ppeak + DCCF (δ). |
| Test Port | Enclosure |
| Test frequency | 2402/2440/2480 MHz |
| Test mode | Continuous Tx - normal modulation - hopping off |
| Condition | Normal |
| Compliant | Yes |
| Comments | Final maximal measurements by variation of turntable azimuth, antenna height and antenna polarization.<br>Test voltage: Powered through USB port by AUX PC. |

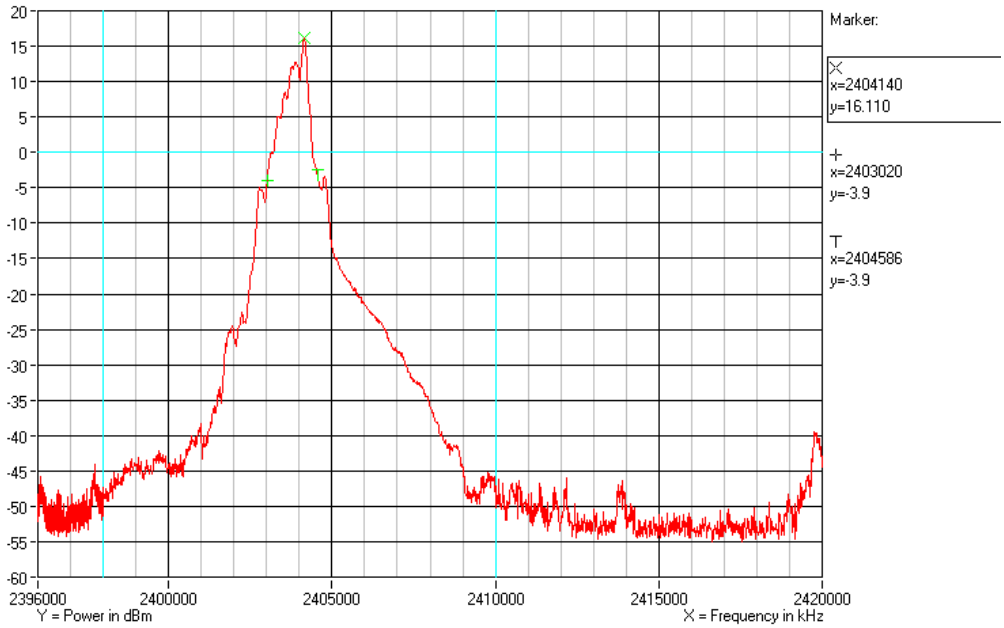
Photo 4.12.1 Test setup regarding measurement of field strength of fundamental.

Photo 4.12.2 Test setup regarding measurement of field strength of fundamental.

## 4.13 Measurement of 20 dB bandwidth, GN Radio Ant 1

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-1 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500041 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

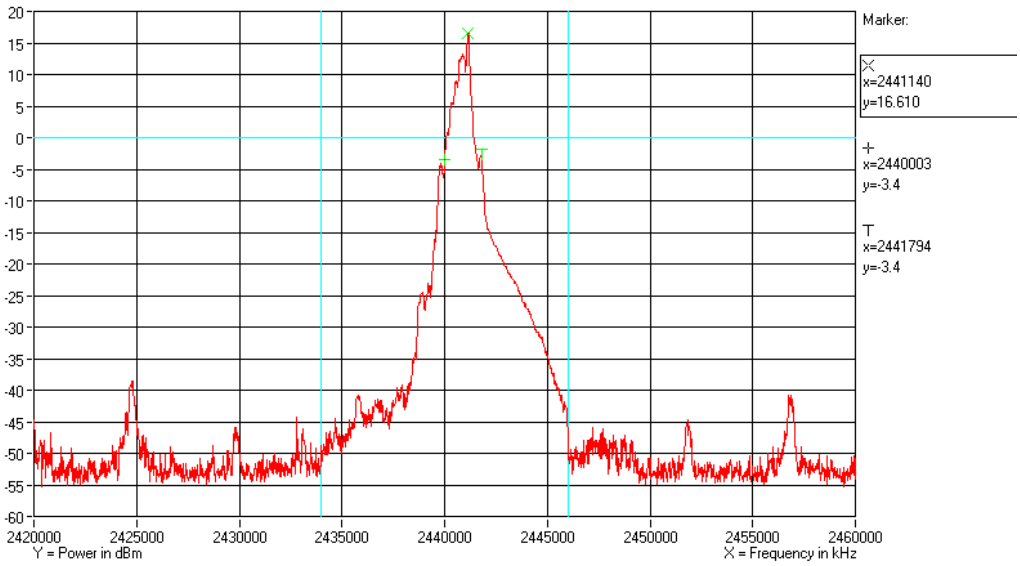
| | | | |
|---|---|---|---|
| Test method | ANSI C63.10:2009 | Temperature | 22 °C |
| Characteristics | Test voltage: External power supply at 5 VDC | Humidity | 44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 24 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2404 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-2 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500041 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

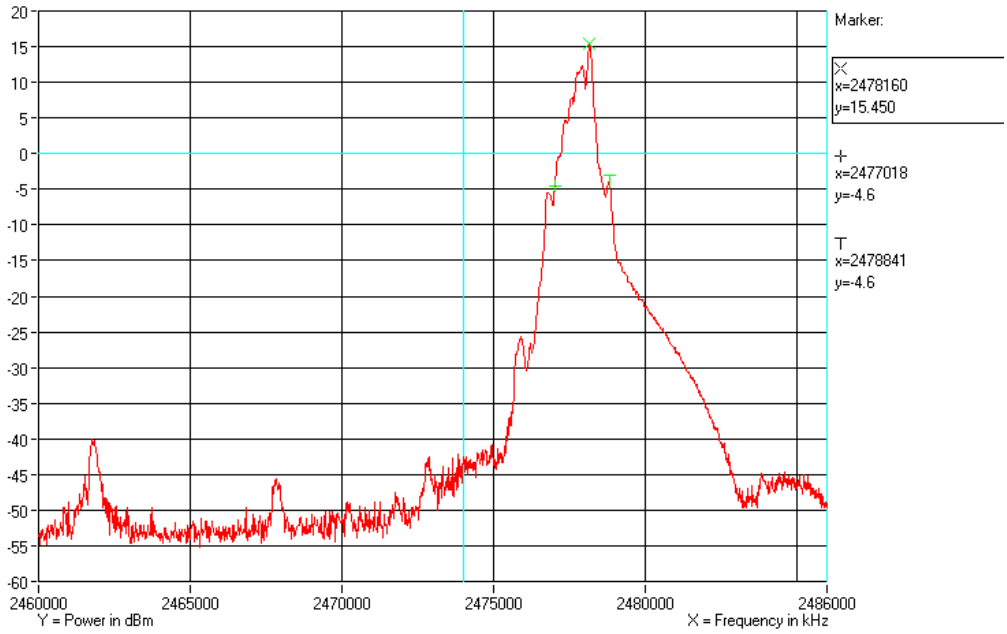
| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 40 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2441 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-1 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500041 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 26 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2478 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-3 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500041 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty: | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 26 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |

| Operating frequency [MHz] | Conducted peak measurement [dBc] | Low frequency [MHz] | High frequency [MHz] | Remarks |
|---|---|---|---|---|
| 2404 | 16.1 | 2403.0 | 2404.6 | - |
| 2441 | 16.6 | 2440.0 | 2441.8 | - |
| 2478 | 15.5 | 2477.0 | 2478.8 | - |

| Operating frequency [MHz] | Measured [MHz] | Limit [MHz] | Remarks |
|---|---|---|---|
| Lowest frequency | 2403.0 | 2400.00 | Passed |
| Highest frequency | 2478.8 | 2483.50 | Passed |

| | |
|---|---|
| Band edge criteria | 20 dB bandwidth |
| Test result | The measured 20 dB bandwidth were within limit designated in 15.215(c) |
| Test port | Antenna replaced by SMA connector |
| Test frequency | 2404/2441/2478 MHz |
| Test mode | Continuous Tx - normal modulation - hopping on |
| Condition | Normal |
| Compliant | Yes |
| Comments | Test voltage: External power supply at 5 VDC through USB port.<br>ANT1. |


Photo 4.13.1 Test setup regarding measurement of 20 dB bandwidth.

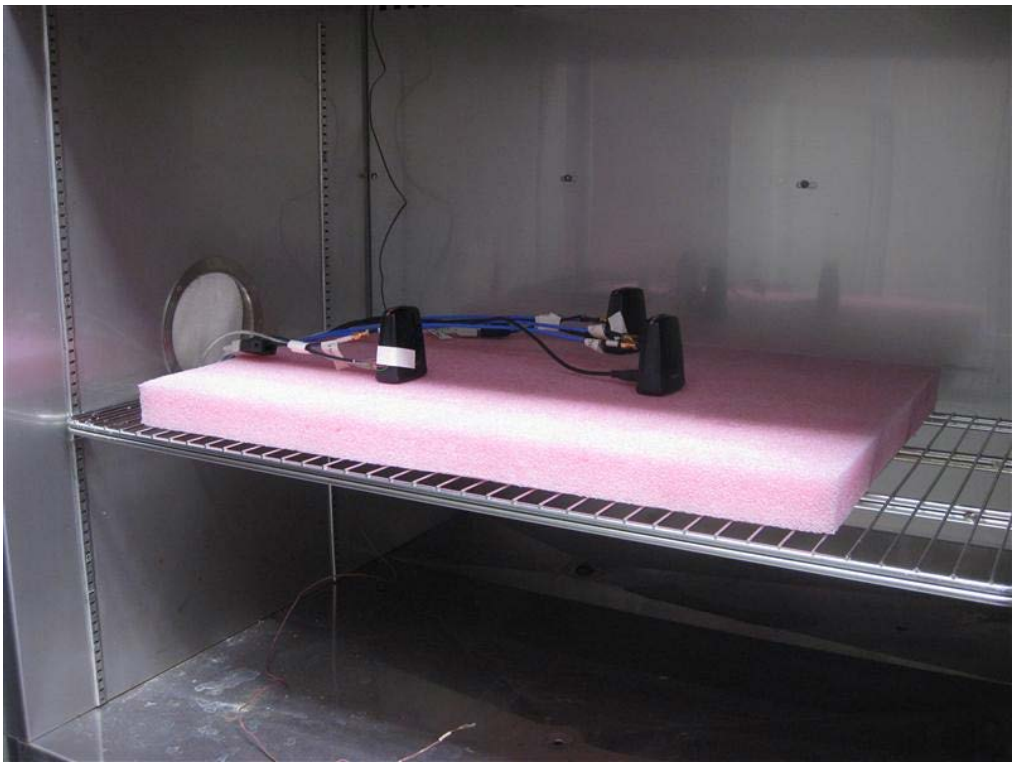
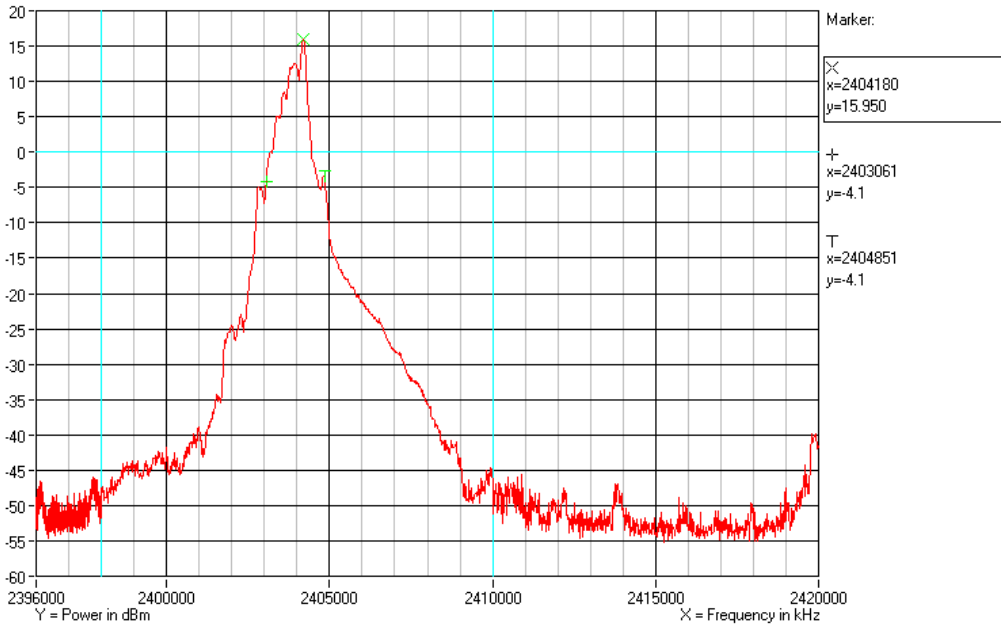


Photo 4.13.2 Test setup regarding measurement of 20 dB bandwidth.

## 4.14 Measurement of 20 dB bandwidth, GN Radio Ant 2

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-4 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500041 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

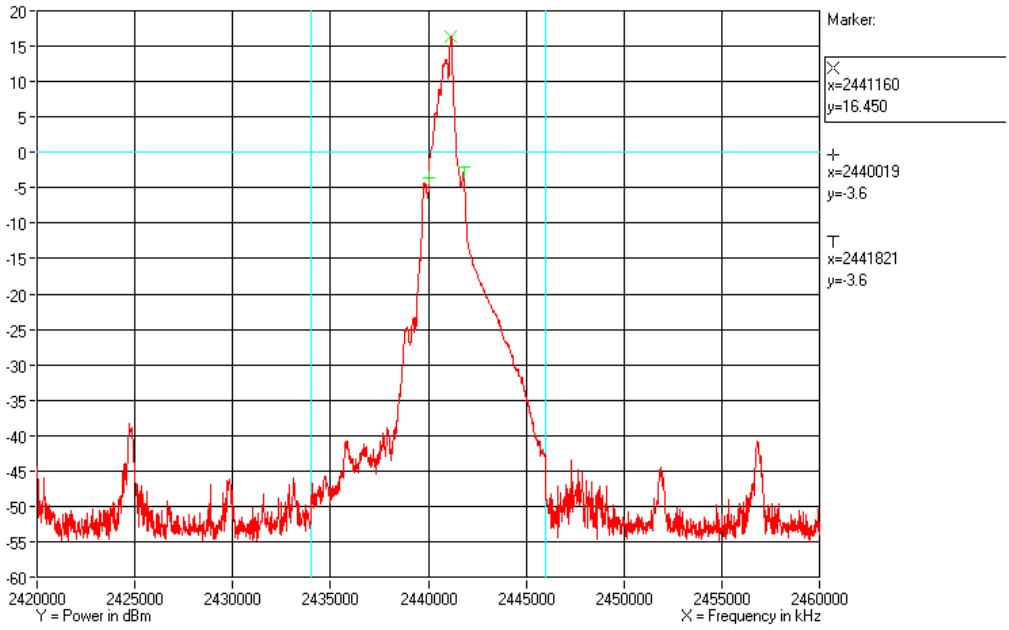
| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 24 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2404 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-5 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500041 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

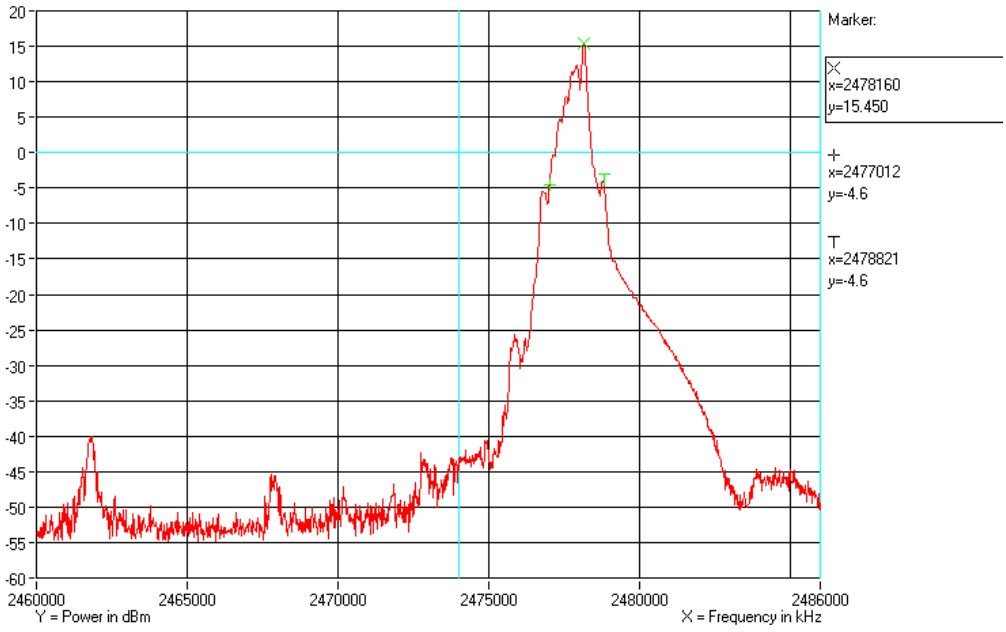
| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 40 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2441 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-2 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500041 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 26 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2478 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-6 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500041 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty: | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 24-40 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |

| Operating frequency [MHz] | Conducted peak measurement [dBc] | Low frequency [MHz] | High frequency [MHz] | Remarks |
|---|---|---|---|---|
| 2404 | 16.0 | 2403.1 | 2404.9 | - |
| 2441 | 16.5 | 2440.0 | 2441.8 | - |
| 2478 | 15.5 | 2477.0 | 2478.8 | - |

| Operating frequency [MHz] | Measured [MHz] | Limit [MHz] | Remarks |
|---|---|---|---|
| Lowest frequency | 2403.1 | 2400.00 | Passed |
| Highest frequency | 2478.8 | 2483.50 | Passed |

| | |
|---|---|
| Band edge criteria | 20 dB bandwidth |
| Test result | The measured 20 dB bandwidth were within limit designated in 15.215(c) |
| Test port | Antenna replaced by SMA connector |
| Test frequency | 2404/2441/2478 MHz |
| Test mode | Continuous Tx - normal modulation - hopping on |
| Condition | Normal |
| Compliant | Yes |
| Comments | Test voltage: External power supply at 5 VDC through USB port.<br>ANT2. |


Photo 4.14.1 Test setup regarding measurement of 20 dB bandwidth.

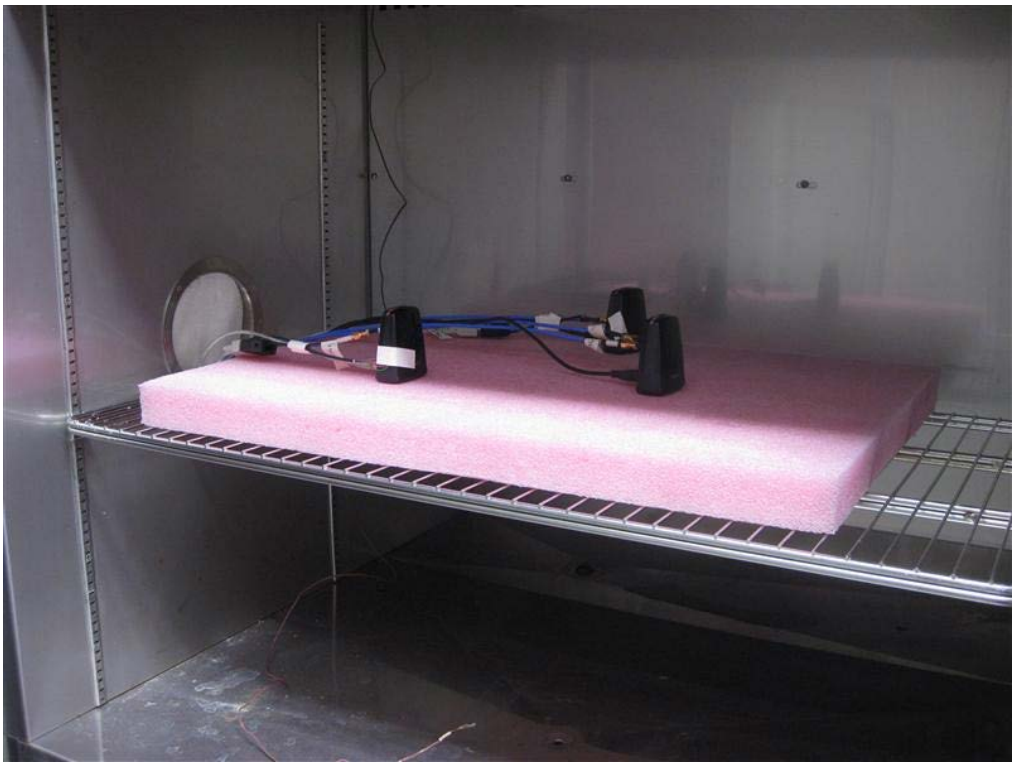
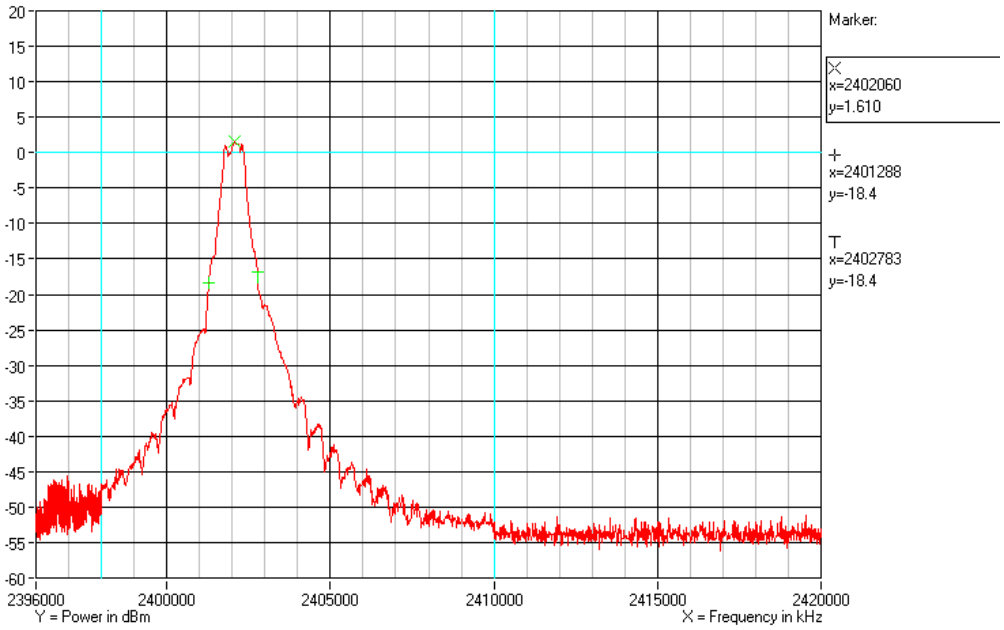


Photo 4.14.2 Test setup regarding measurement of 20 dB bandwidth.

## 4.15 Measurement of 20 dB bandwidth, BT Radio Ant 1

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-7 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500046 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

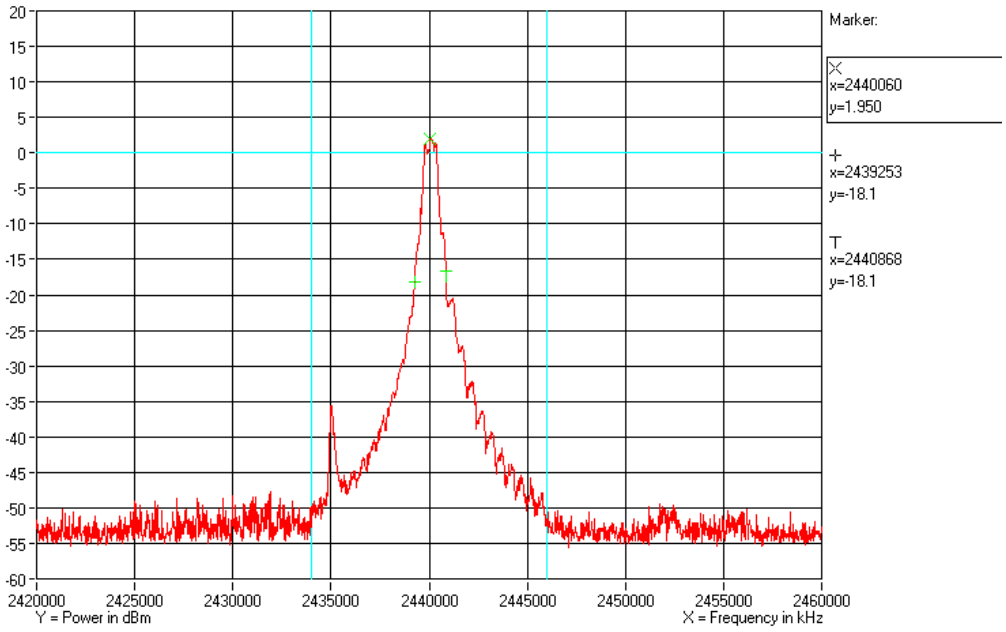
| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 26 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2402 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-8 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500046 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

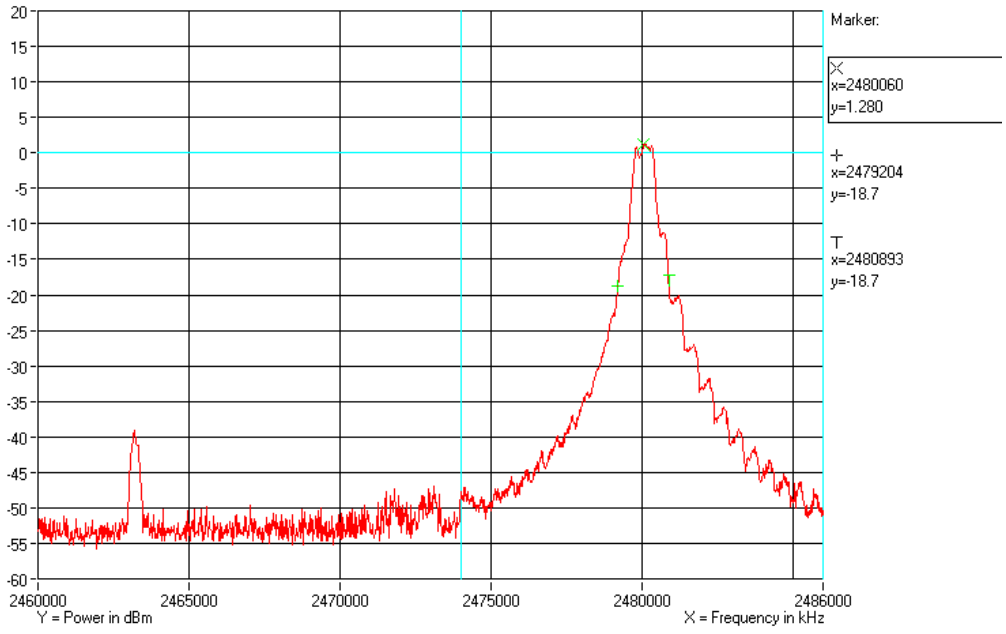
| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 40 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2440 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-3 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500046 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 26 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2480 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-9 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500046 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty: | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 24-40 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |

| Operating frequency [MHz] | Conducted peak measurement [dBc] | Low frequency [MHz] | High frequency [MHz] | Remarks |
|---|---|---|---|---|
| 2402 | 1.6 | 2401.3 | 2402.8 | - |
| 2440 | 2.0 | 2439.3 | 2440.9 | - |
| 2480 | 1.3 | 2479.2 | 2480.9 | - |
| Note 1: | | | | |

| Operating frequency [MHz] | Measured [MHz] | Limit [MHz] | Remarks |
|---|---|---|---|
| Lowest frequency | 2401.3 | 2400.00 | Passed |
| Highest frequency | 2480.9 | 2483.50 | Passed |

| | |
|---|---|
| Band edge criteria | 20 dB bandwidth |
| Test result | The measured 20 dB bandwidth were within limit designated in 15.215(c) |
| Test port | Antenna replaced by SMA connector |
| Test frequency | 2402/2440/2480 MHz |
| Test mode | Continuous Tx - GFSK modulation - hopping off |
| Condition | Normal |
| Compliant | Yes |
| Comments | Test voltage: External power supply at 5 VDC through USB port.<br>ANT1. |


Photo 4.15.1 Test setup regarding measurement of 20 dB bandwidth.

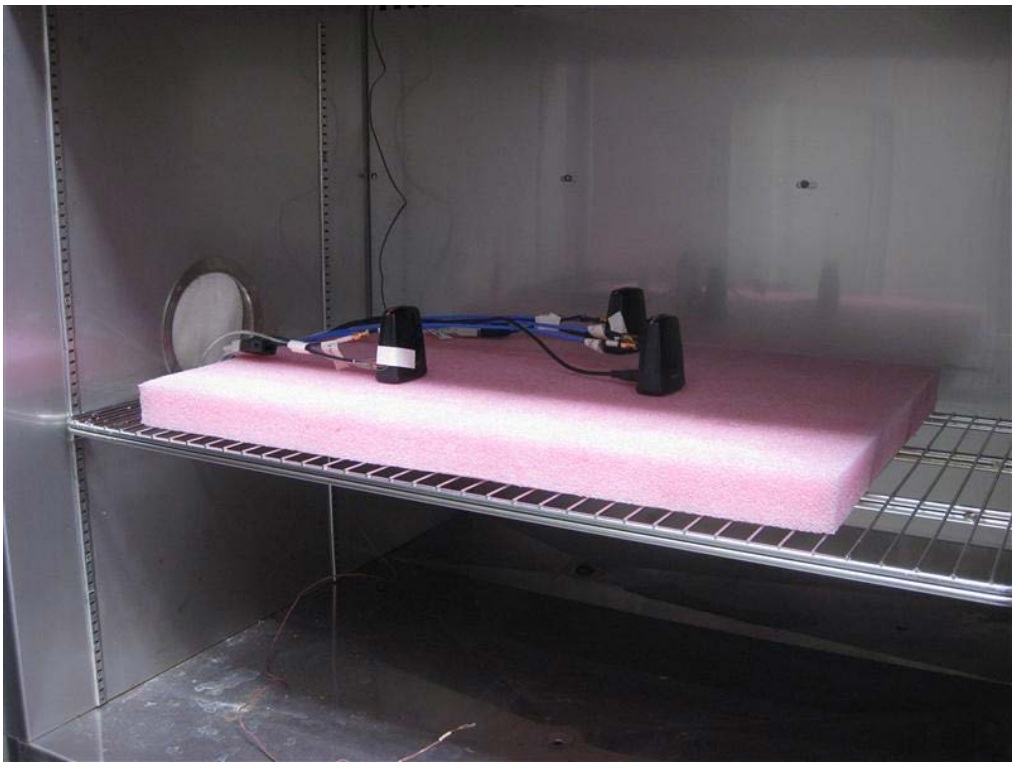
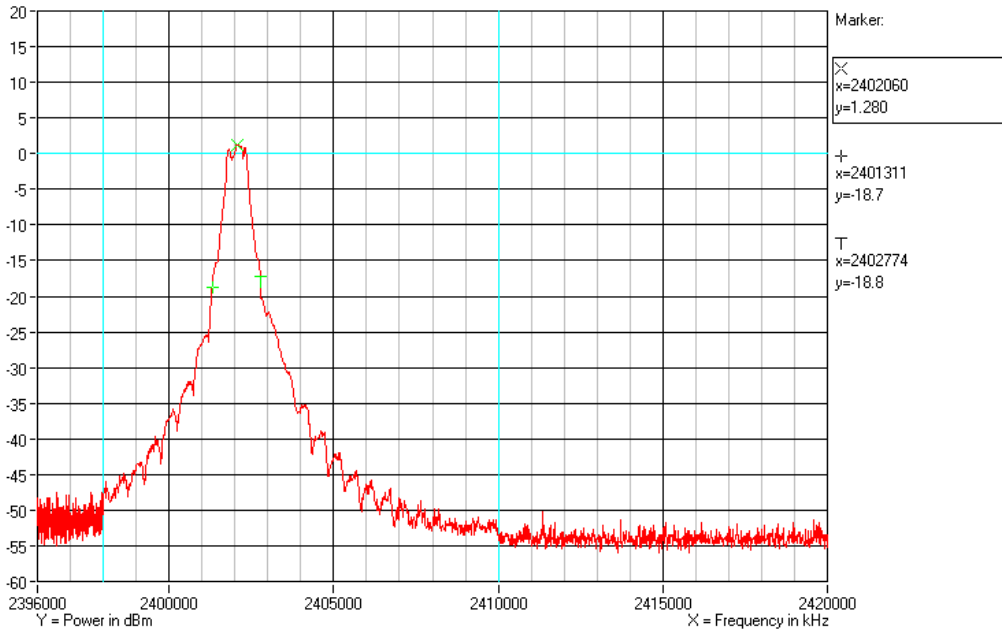


Photo 4.15.2 Test setup regarding measurement of 20 dB bandwidth.

## 4.16 Measurement of 20 dB bandwidth, BT Radio Ant 2

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-10 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500038 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

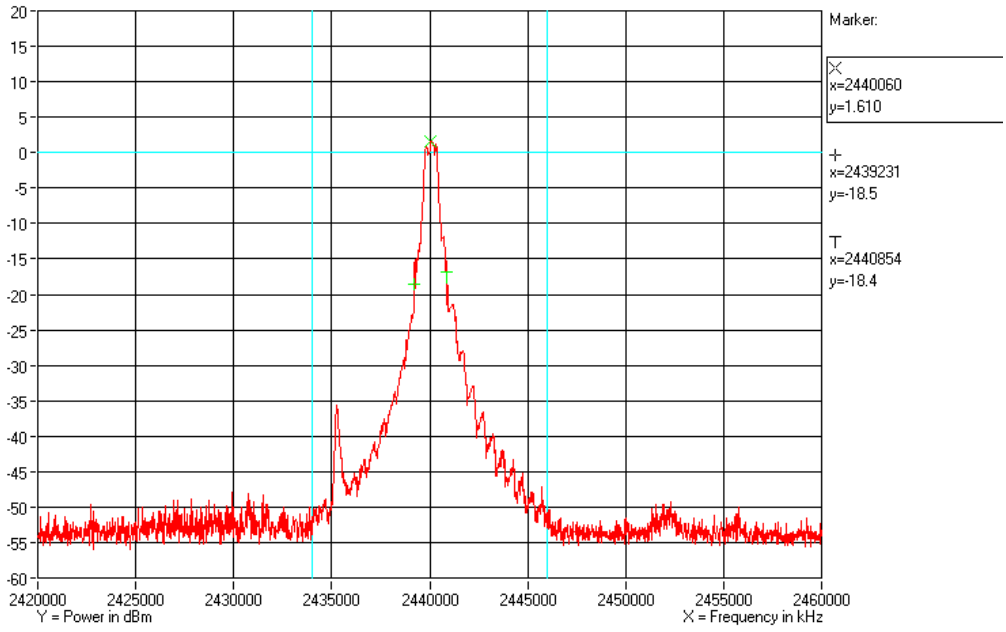
| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 26 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2402 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-11 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500038 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

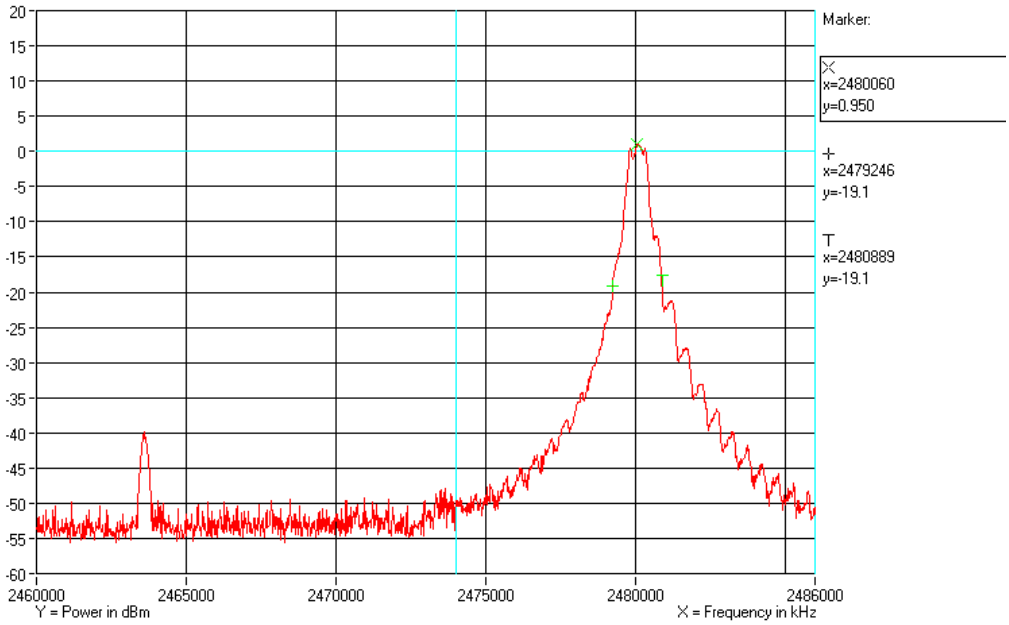
| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 40 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2440 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-4 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500038 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 24 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2480 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-12 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500038 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty: | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 24-40 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |

| Operating frequency [MHz] | Conducted peak measurement [dBc] | Low frequency [MHz] | High frequency [MHz] | Remarks |
|---|---|---|---|---|
| 2402 | 1.3 | 2401.3 | 2402.8 | - |
| 2440 | 1.6 | 2439.2 | 2440.9 | - |
| 2480 | 1.0 | 2479.2 | 2480.9 | - |

| Operating frequency [MHz] | Measured [MHz] | Limit [MHz] | Remarks |
|---|---|---|---|
| Lowest frequency | 2401.3 | 2400.00 | Passed |
| Highest frequency | 2480.9 | 2483.50 | Passed |

| | |
|---|---|
| Band edge criteria | 20 dB bandwidth |
| Test result | The measured 20 dB bandwidth were within limit designated in 15.215(c) |
| Test port | Antenna replaced by SMA connector |
| Test frequency | 2402/2440/2480 MHz |
| Test mode | Continuous Tx - GFSK modulation - hopping off |
| Condition | Normal |
| Compliant | Yes |
| Comments | Test voltage: External power supply at 5 VDC through USB port.<br>ANT 2. |


Photo 4.16.1 Test setup regarding measurement of 20 dB bandwidth.

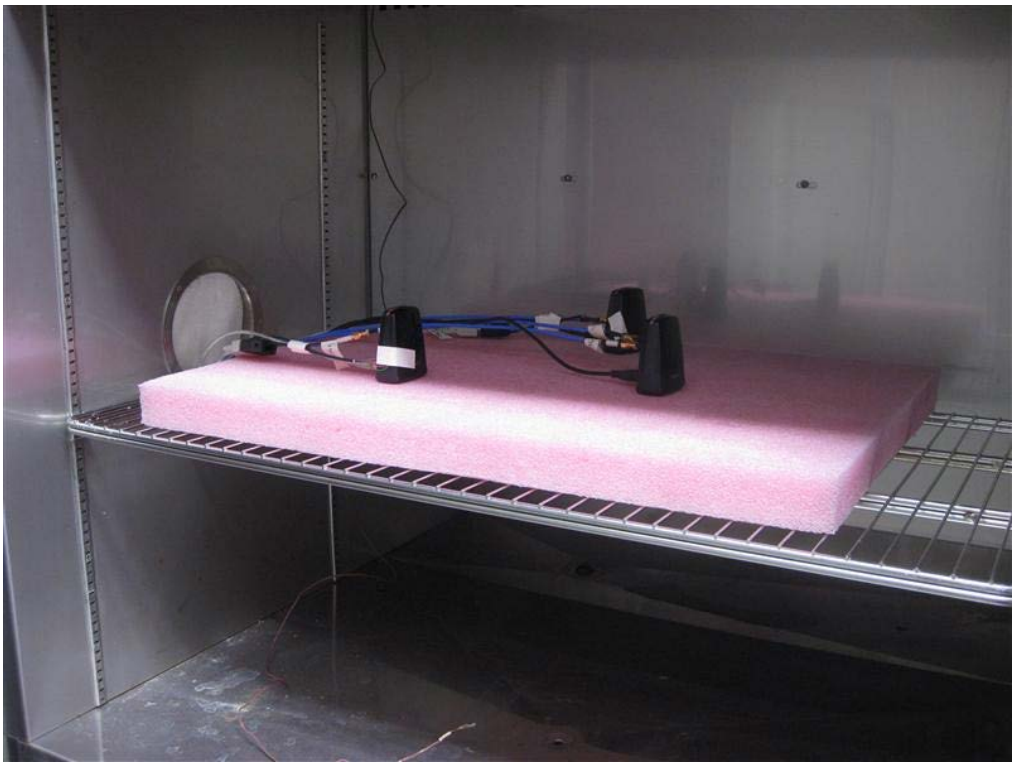


Photo 4.16.2 Test setup regarding measurement of 20 dB bandwidth.

## 4.17 Measurement of band edge compliance, GN radio

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-13 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500050 | Date | 06 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 1-25 GHz |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Complete search, antenna distance 3 m | Temperature<br>Humidity | 24 °C<br>54 % RH |
| Detector | Peak and average for 1GHz to 25 GHz | Bandwidth | 1 MHz |
| Test equipm. | EMI room Hørsholm 49086 49600 49624 49625 | Uncertainty | 4.9 dB |

| Band Edge frequency [MHz] | Operating frequency [MHz] | Average / Peak | Fundamental field strengths [dBµV/m] | Marker-delta method [dB] | Corrected [dBµV/m] | Limit at Band Edge [dBµV/m] | Remarks |
|---|---|---|---|---|---|---|---|
| 2400 | 2404 | Average | 94 | 57.6 | 36.4 | 54 | - |
| 2400 | 2404 | Peak | 113.5 | 57.6 | 55.9 | 74 | - |
| 2483.5 | 2478 | Average | 94 | 64.4 | 29.6 | 54 | - |
| 2483.5 | 2478 | Peak | 113.5 | 64.4 | 49.1 | 74 | - |

Test result: The measured and corrected peak and average field strengths at the band edge were below the peak and average limits

Test Port: Enclosure and antenna connector

Test frequency: 2404/2478 MHz

Test mode: Continuous Tx - normal modulation - hopping on

Condition: Normal

Compliant: Yes

Comments: Marker-delta method for band edge measurements was used to correct the measurements for the peak and average field strengths at band edge according to ANSI C63.10:2009 Section 6.9.3.

Test voltage: External power supply at 5 VDC through USB port.

## 4.18 Measurement of band edge compliance, BT radio

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-14 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500013 | Date | 28 May 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | Frequency | 1-25 GHz |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | ANSI C63.10:2009<br>Complete search, Antenna distance 3 m. | Temperature<br>Humidity | 22 °C<br>58 % RH |
| Detector | Peak and average for 1GHz to 25 GHz | Bandwidth | 1 MHz |
| Test equipm. | EMI room Hørsholm 49086 49600 49624 49625 | Uncertainty | 4.9 dB |

| Band Edge frequency [MHz] | Operating frequency [MHz] | Average / Peak | Fundamental field strengths [dBµV/m] | Marker-delta method [dB] | Corrected [dBµV/m] | Limit at Band Edge [dBµV/m] | Remarks |
|---|---|---|---|---|---|---|---|
| 2400 | 2402 | Average | 91.5 | 38.1 | 53.4 | 54 | - |
| 2400 | 2402 | Peak | 95.1 | 38.1 | 57.0 | 74 | - |
| 2483.5 | 2480 | Average | 91.5 | 44.2 | 47.3 | 54 | - |
| 2483.5 | 2480 | Peak | 95.1 | 44.2 | 50.9 | 74 | - |

Test result: The measured and corrected peak and average field strengths at the band edge were below the peak and average limits.

Test Port: Enclosure and antenna connector

Test frequency: 2402/2480 MHz

Test mode: Continuous Tx - GFSK modulation - hopping off

Condition: Normal

Compliant: Yes

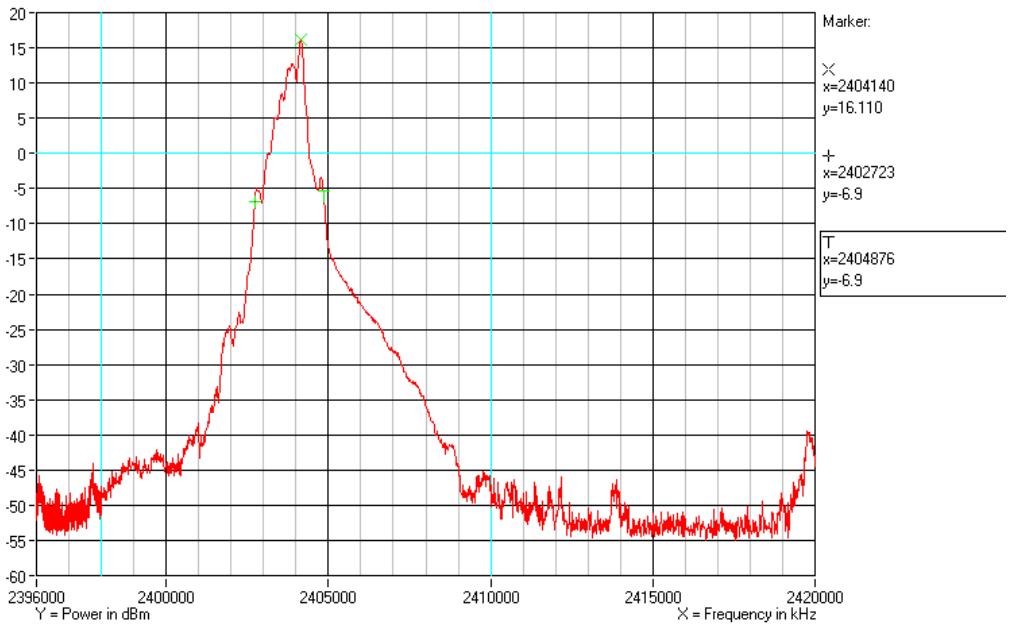
Comments: Marker-delta method for band edge measurements was used to correct the measurements for the peak and average field strengths at band edge according to ANSI C63.10:2009 Section 6.9.3.

Test voltage: External power supply at 5 VDC through USB port.

## 4.19 Measurement of occupied bandwidth, IC, GN radio Ant 1

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-15 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500041 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

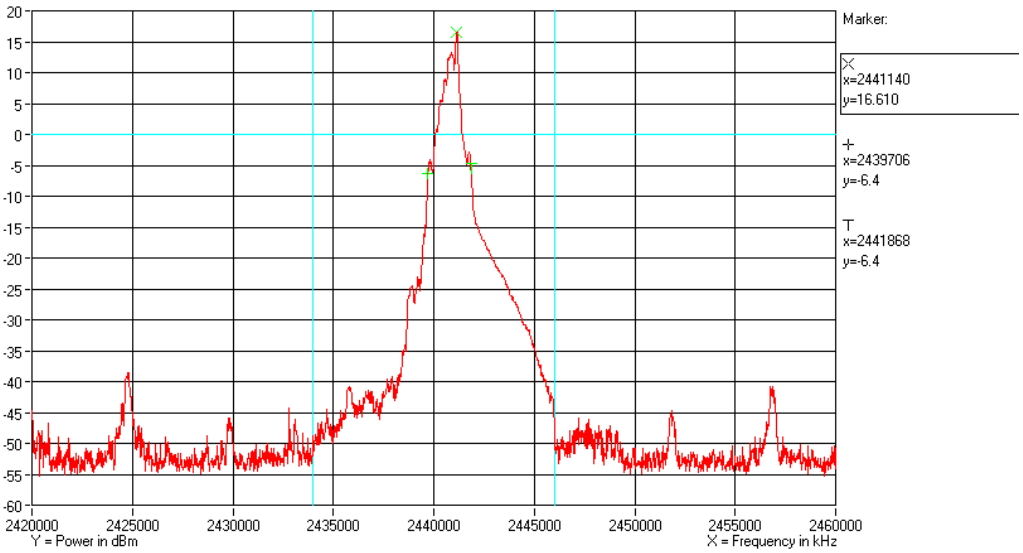
| | | | |
|---|---|---|---|
| Test method<br>Characteristics | IC Standard RSS-Gen, Issue 3:2010 - Section 4.6.1<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 24 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2404 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-16 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500041 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

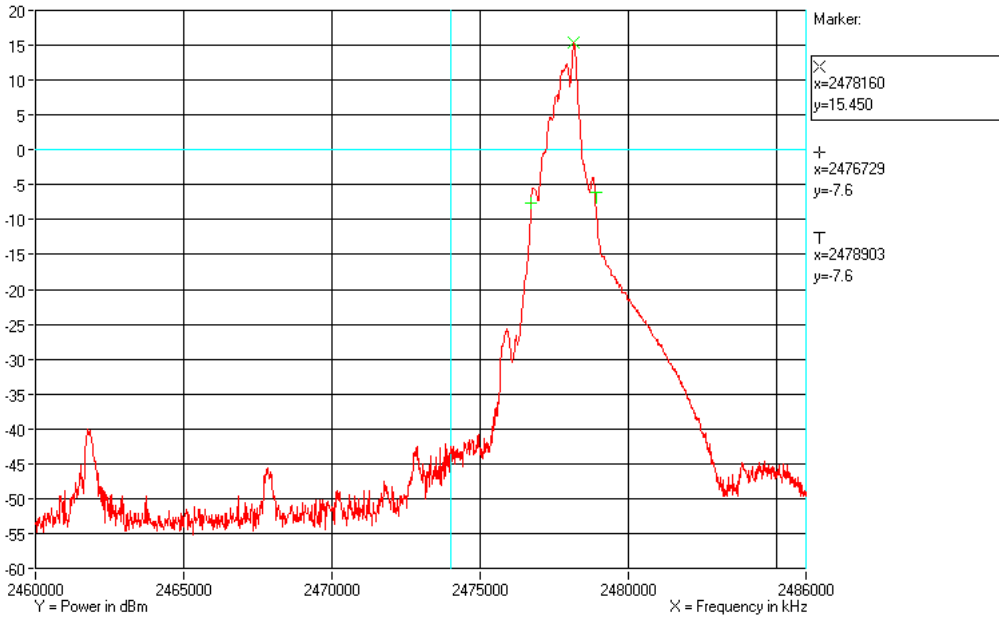
| | | | |
|---|---|---|---|
| Test method<br>Characteristics | IC Standard RSS-Gen, Issue 3:2010 - Section 4.6.1<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 40 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2441 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-17 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500041 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | IC Standard RSS-Gen, Issue 3:2010 - Section 4.6.1<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 26 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2478 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-18 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500041 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | IC Standard RSS-Gen, Issue 3:2010 - Section 4.6.1<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 24-40 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |

| Operating frequency [MHz] | Low frequency [MHz] | High frequency [MHz] | Measured 99% emission bandwidth [MHz] |
|---|---|---|---|
| 2404 | 2402.7 | 2404.9 | 2.2 |
| 2441 | 2439.7 | 2441.9 | 2.2 |
| 2478 | 2476.7 | 2478.9 | 2.2 |
| Note 1: | | | |

| | |
|---|---|
| Band edge criteria | Measured 99 % emission bandwidth (23 dBc) |
| Test port | Antenna replaced by SMA connector |
| Test frequency | 2404/2441/2478 MHz |
| Test mode | Continuous Tx - normal modulation - hopping on |
| Condition | Normal |
| Comments | Test voltage: External power supply at 5 VDC through USB port |


Photo 4.19.1 Test setup regarding occupied bandwidth.

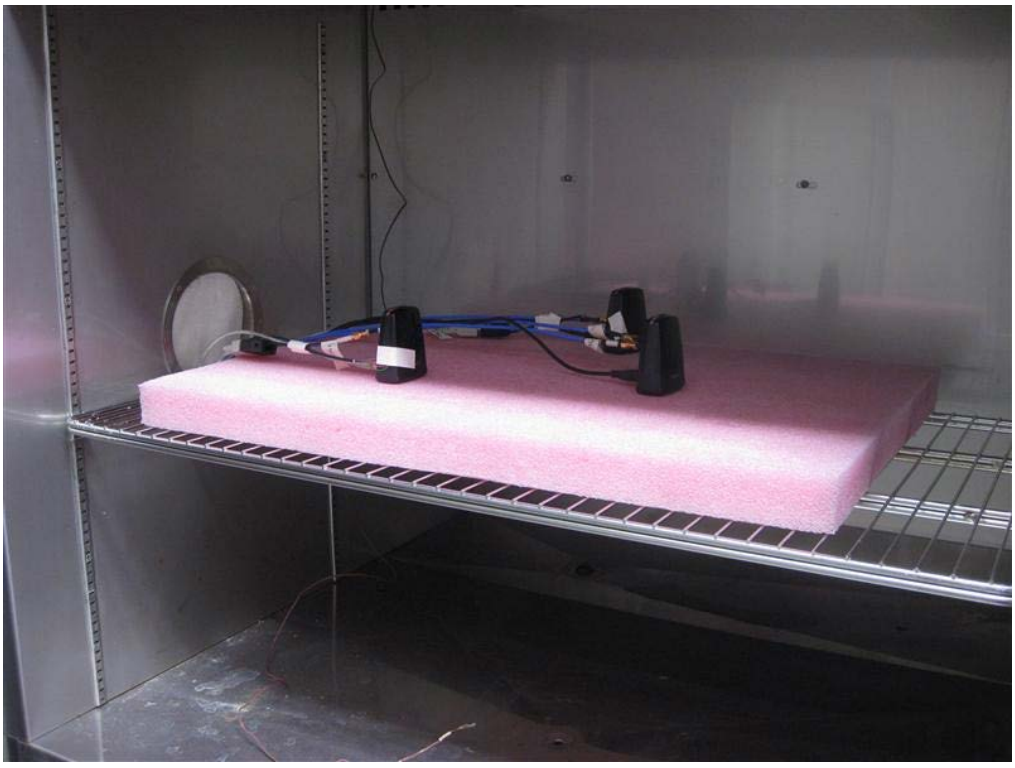
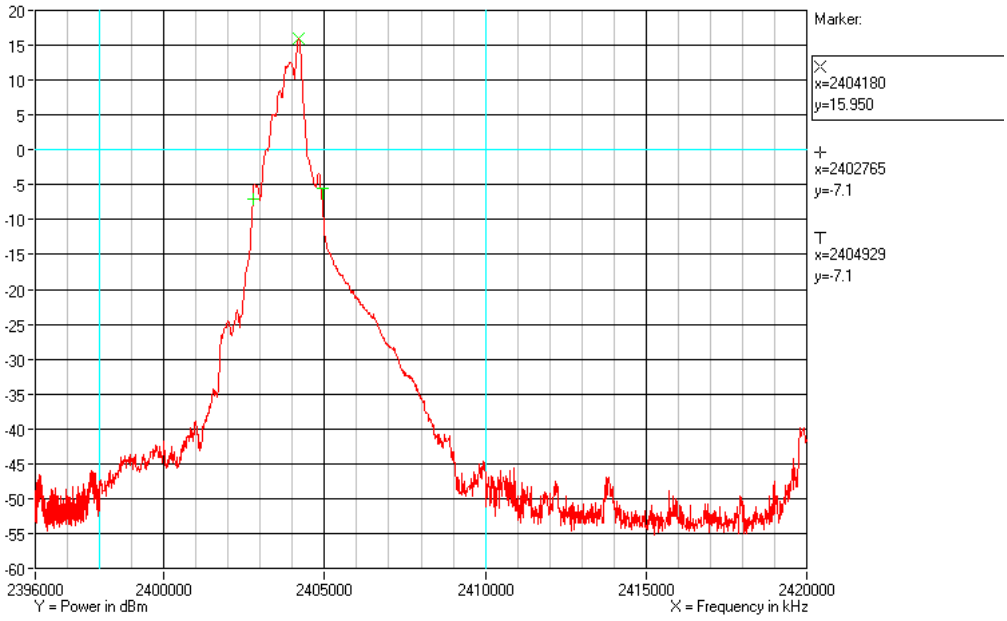


Photo 4.19.2 Test setup regarding occupied bandwidth.

## 4.20 Measurement of occupied bandwidth, IC, GN radio Ant 2

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-19 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500041 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

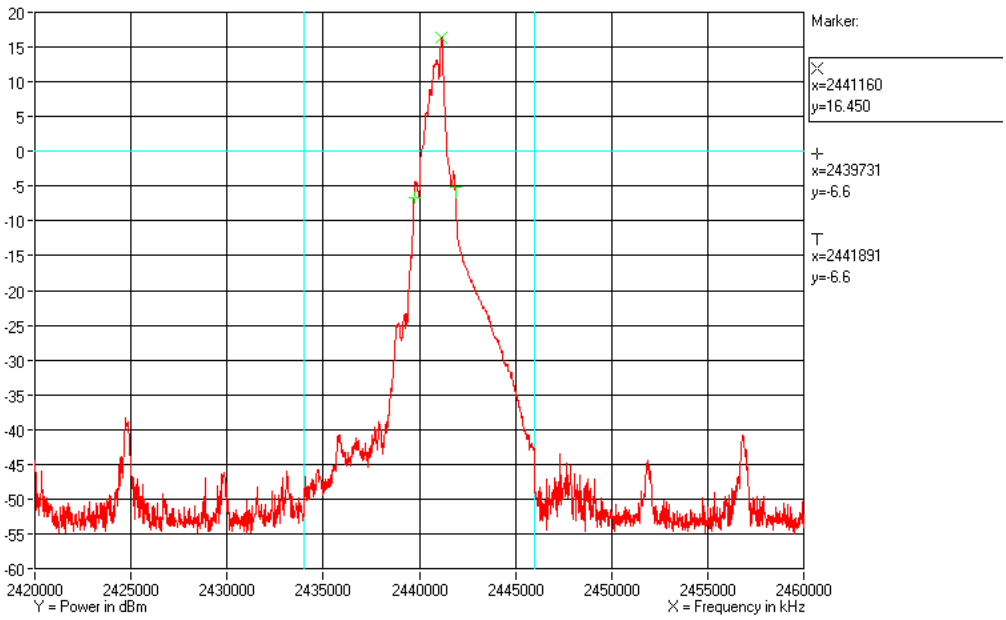
| | | | |
|---|---|---|---|
| Test method<br>Characteristics | IC Standard RSS-Gen, Issue 3:2010 - Section 4.6.1<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 24 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2404 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-20 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500041 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

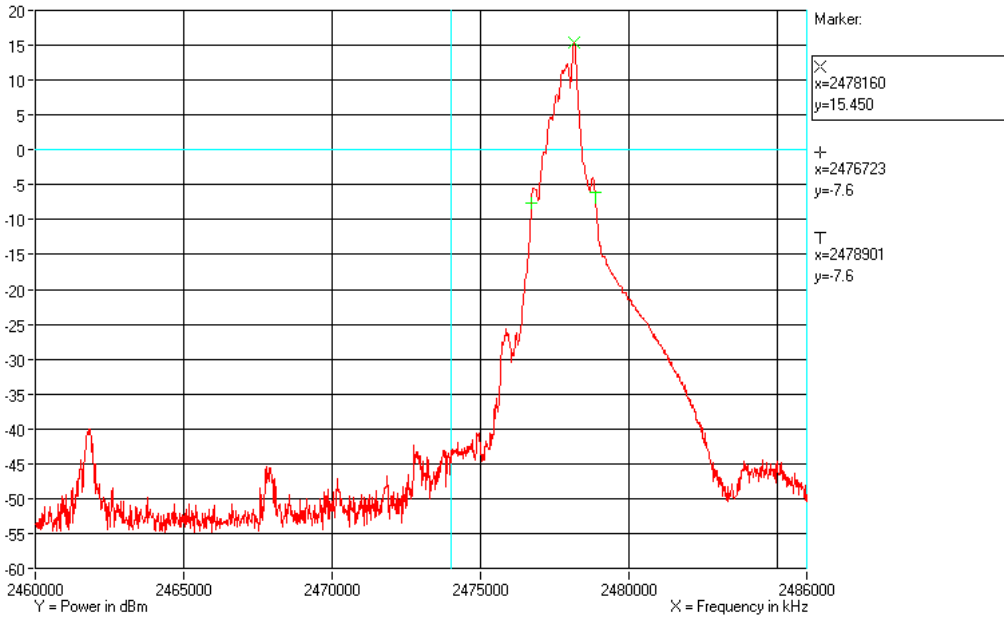
| | | | |
|---|---|---|---|
| Test method<br>Characteristics | IC Standard RSS-Gen, Issue 3:2010 - Section 4.6.1<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 40 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2441 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-21 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500041 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | IC Standard RSS-Gen, Issue 3:2010 - Section 4.6.1<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 26 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2478 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-22 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500041 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | IC Standard RSS-Gen, Issue 3:2010 - Section 4.6.1<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 24-40 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |

| Operating frequency [MHz] | Low frequency [MHz] | High frequency [MHz] | Measured 99% emission bandwidth [MHz] |
|---|---|---|---|
| 2404 | 2402.8 | 2404.9 | 2.1 |
| 2441 | 2439.7 | 2441.9 | 2.2 |
| 2478 | 2476.7 | 2478.9 | 2.2 |
| Note 1: | | | |

| | |
|---|---|
| Band edge criteria | Measured 99 % emission bandwidth (23 dBc) |
| Test port | Antenna replaced by SMA connector |
| Test frequency | 2404/2441/2478 MHz |
| Test mode | Continuous Tx - normal modulation - hopping on |
| Condition | Normal |
| Comments | Test voltage: External power supply at 5 VDC through USB port |


Photo 4.20.1 Test setup regarding occupied bandwidth.

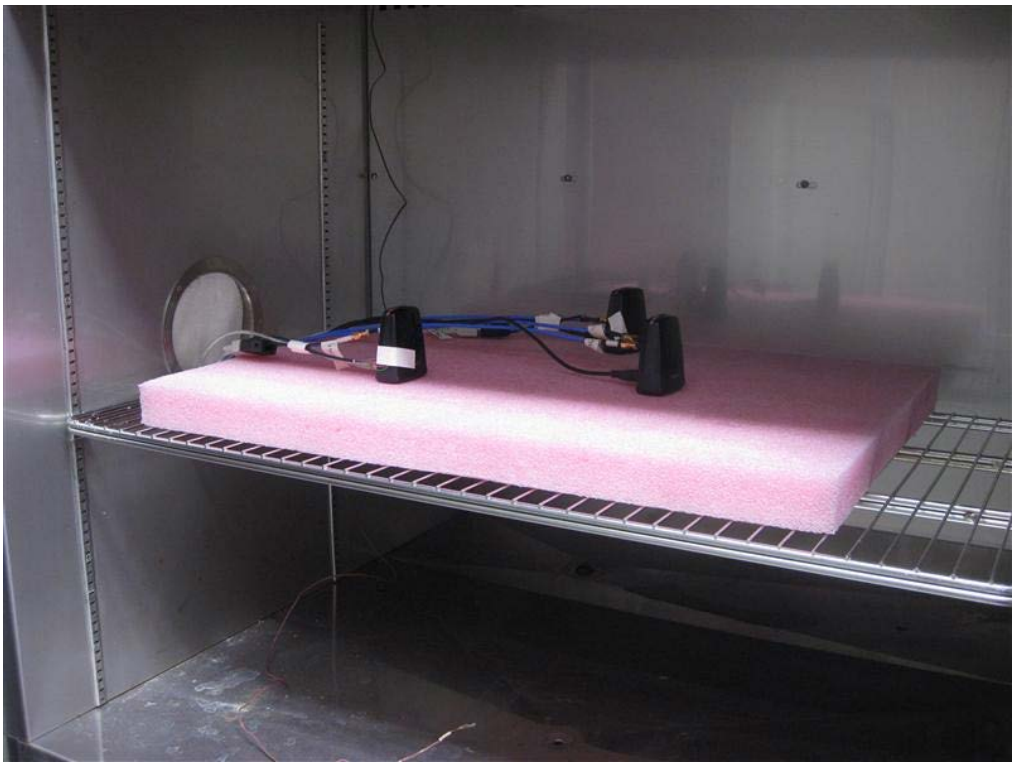
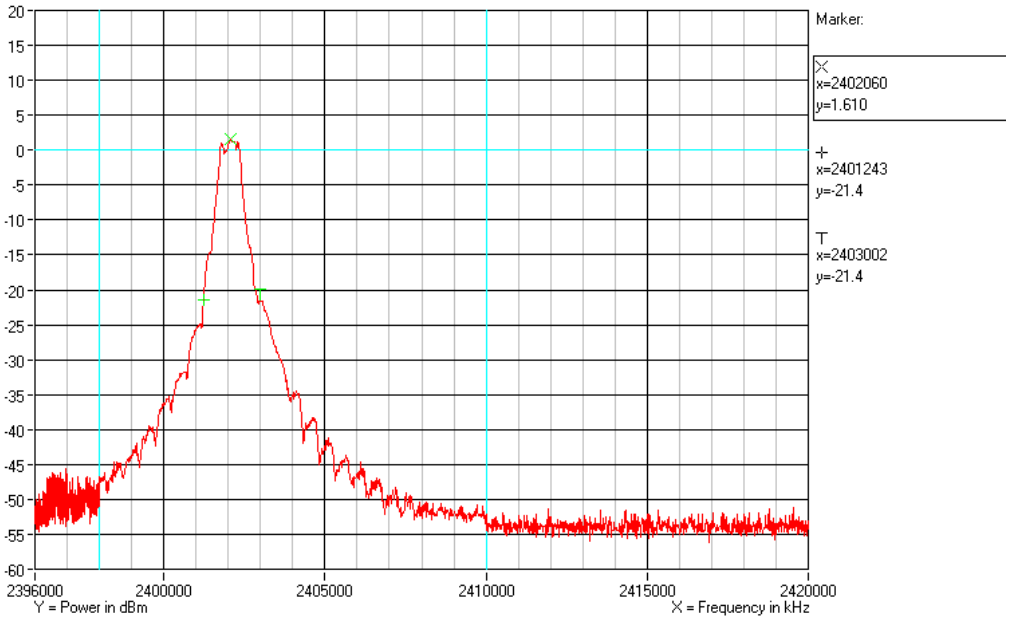


Photo 4.20.2 Test setup regarding occupied bandwidth.

## 4.21 Measurement of occupied bandwidth, IC, BT radio Ant1

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-23 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500046 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

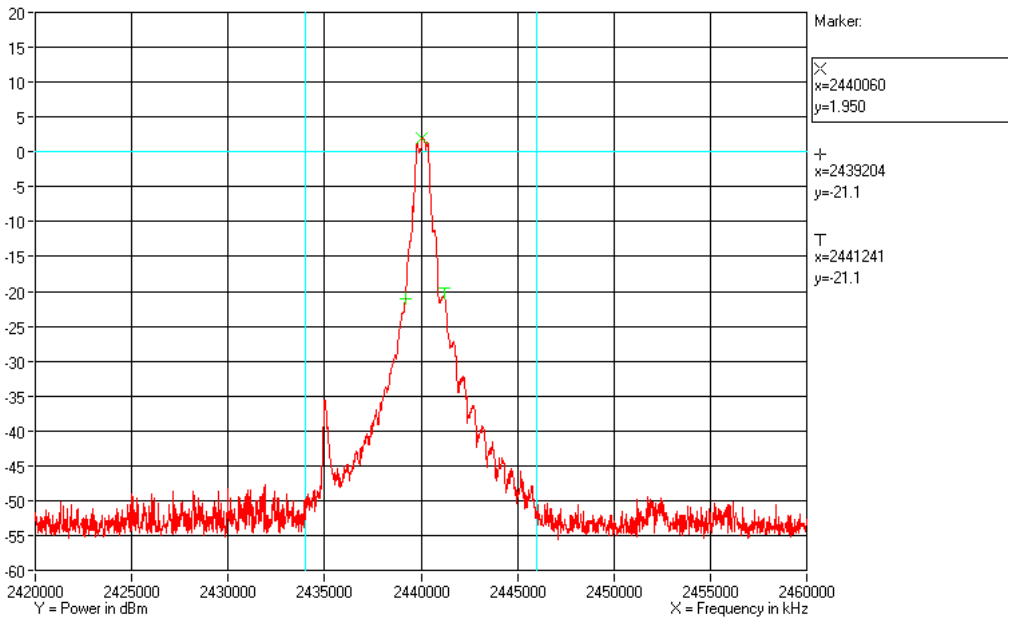
| | | | |
|---|---|---|---|
| Test method<br>Characteristics | IC Standard RSS-Gen, Issue 3:2010 - Section 4.6.1<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 24 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2402 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-24 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500046 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

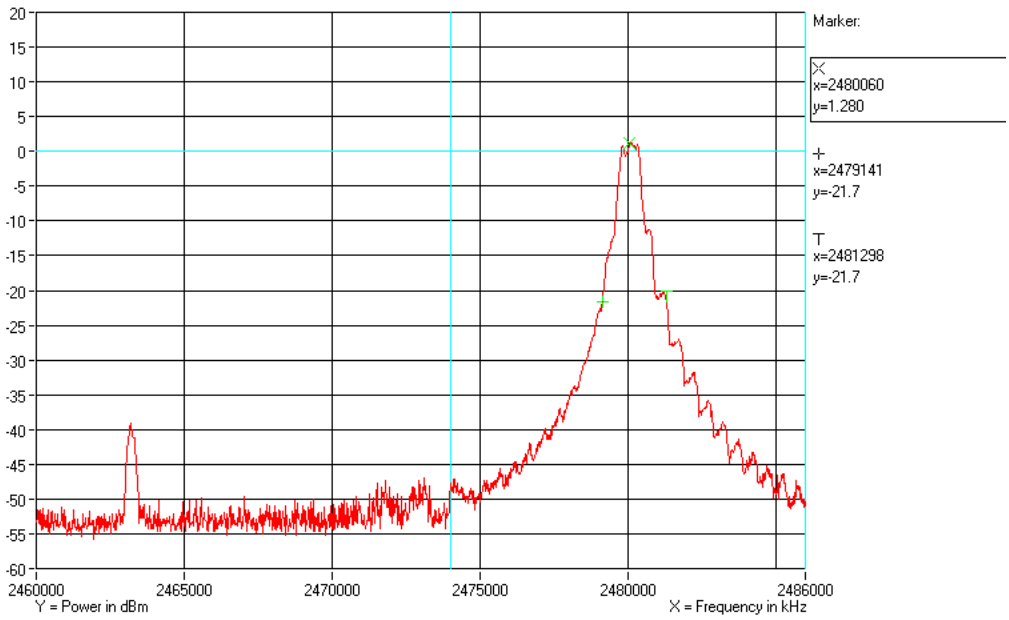
| | | | |
|---|---|---|---|
| Test method<br>Characteristics | IC Standard RSS-Gen, Issue 3:2010 - Section 4.6.1<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 40 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2440 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-25 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500046 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | IC Standard RSS-Gen, Issue 3:2010 - Section 4.6.1<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 26 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2480 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-26 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500046 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | IC Standard RSS-Gen, Issue 3:2010 - Section 4.6.1<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 24-40 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |

| Operating frequency [MHz] | Low frequency [MHz] | High frequency [MHz] | Measured 99% emission bandwidth [MHz] |
|---|---|---|---|
| 2402 | 2401.2 | 2403.0 | 1.8 |
| 2440 | 2439.2 | 2441.2 | 2.0 |
| 2480 | 2479.1 | 2481.3 | 2.2 |

| | |
|---|---|
| Band edge criteria | Measured 99 % emission bandwidth (23 dBc) |
| Test port | Antenna replaced by SMA connector |
| Test frequency | 2402/2440/2480 MHz |
| Test mode | Continuous Tx - GFSK modulation - hopping off |
| Condition | Normal |
| Comments | Test voltage: External power supply at 5 VDC through USB port |


Photo 4.21.1 Test setup regarding occupied bandwidth.

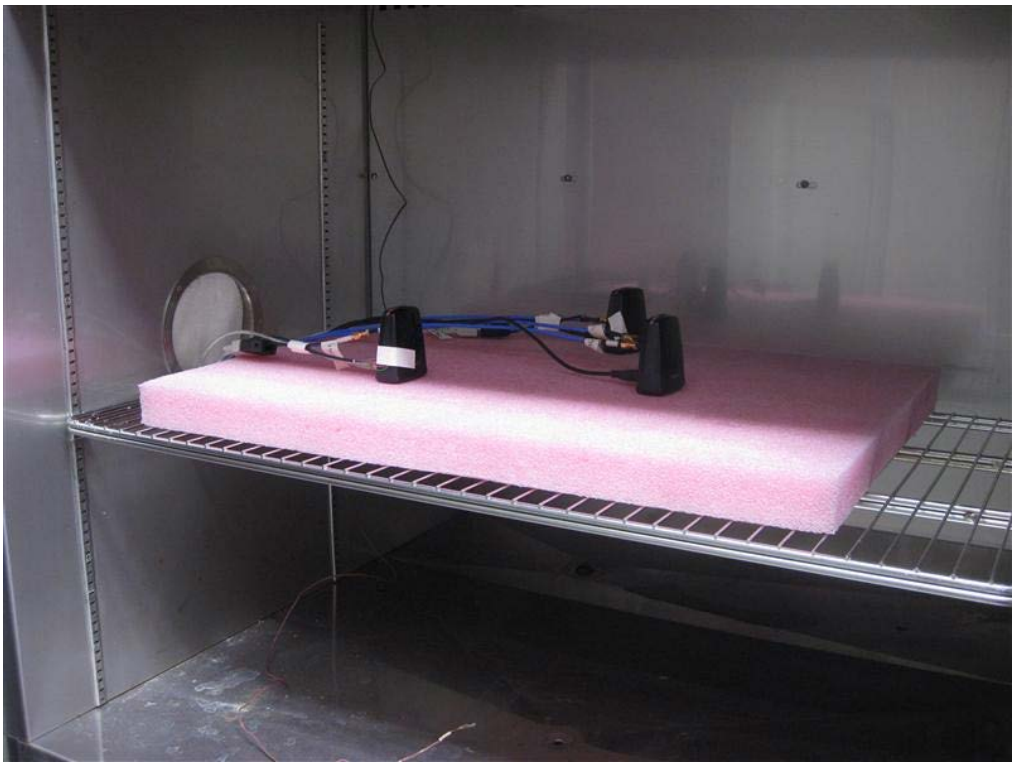
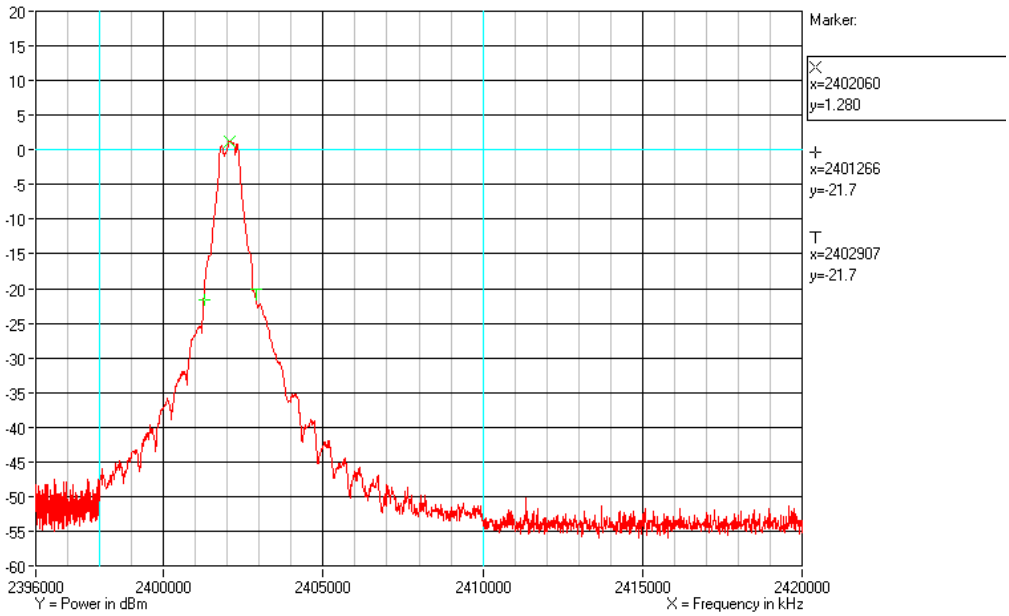


Photo 4.21.2 Test setup regarding occupied bandwidth.

## 4.22 Measurement of occupied bandwidth, IC, BT radio Ant 2

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-27 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500038 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

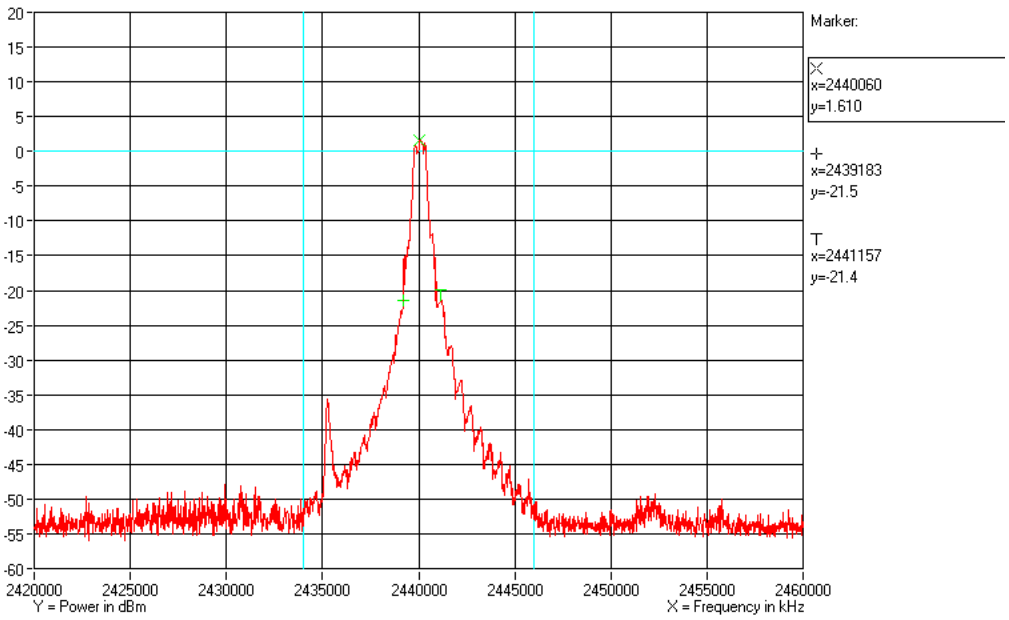
| | | | |
|---|---|---|---|
| Test method<br>Characteristics | IC Standard RSS-Gen, Issue 3:2010 - Section 4.6.1<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 24 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2402 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-28 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500038 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

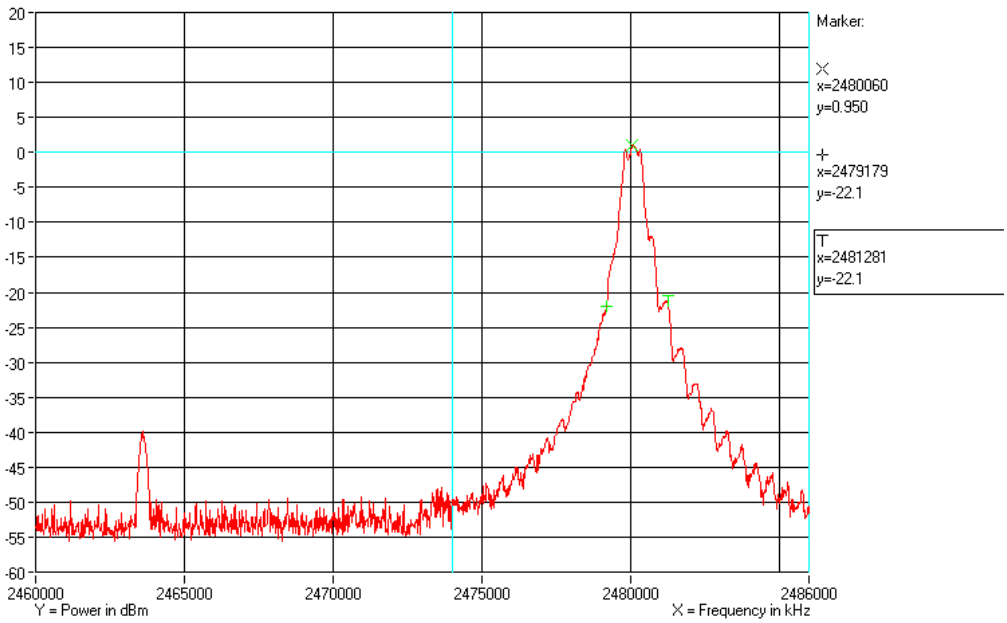
| | | | |
|---|---|---|---|
| Test method<br>Characteristics | IC Standard RSS-Gen, Issue 3:2010 - Section 4.6.1<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 40 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2440 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-29 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500038 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | IC Standard RSS-Gen, Issue 3:2010 - Section 4.6.1<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 26 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |




Comments Operating frequency: 2480 MHz

| | | | |
|---|---|---|---|
| Test object | FD-2 | Sheet | PROF-30 |
| Type | FD-2 | Project no. | T205844-2 |
| Serial no. | 131500038 | Date | 04 June 2013 |
| Client | GN Hearing A/S | Initials | PWF |
| Specification | See Section 1 Summary of tests | | |

| | | | |
|---|---|---|---|
| Test method<br>Characteristics | IC Standard RSS-Gen, Issue 3:2010 - Section 4.6.1<br>Test voltage: External power supply at 5 VDC | Temperature<br>Humidity | 22 °C<br>44 % RH |
| Test equipm. | Climatic chamber EVFGT-47 49183 49321 | Uncertainty | 1.1 dB |
| SA Settings | RBW: 100 kHz VBW: 300 kHz SPAN: 24-40 MHz DET: Peak CF: Operating freq. Trace: Max. hold | | |

| Operating frequency [MHz] | Low frequency [MHz] | High frequency [MHz] | Measured 99% emission bandwidth [MHz] |
|---|---|---|---|
| 2402 | 2401.3 | 2402.9 | 1.6 |
| 2440 | 2439.2 | 2441.2 | 2.0 |
| 2480 | 2479.2 | 2481.3 | 2.1 |
| Note 1: | | | |

| | |
|---|---|
| Band edge criteria | Measured 99 % emission bandwidth (23 dBc) |
| Test port | Antenna replaced by SMA connector |
| Test frequency | 2402/2440/2480 MHz |
| Test mode | Continuous Tx - GFSK modulation - hopping off |
| Condition | Normal |
| Comments | None |


Photo 4.22.1 Test setup regarding occupied bandwidth.

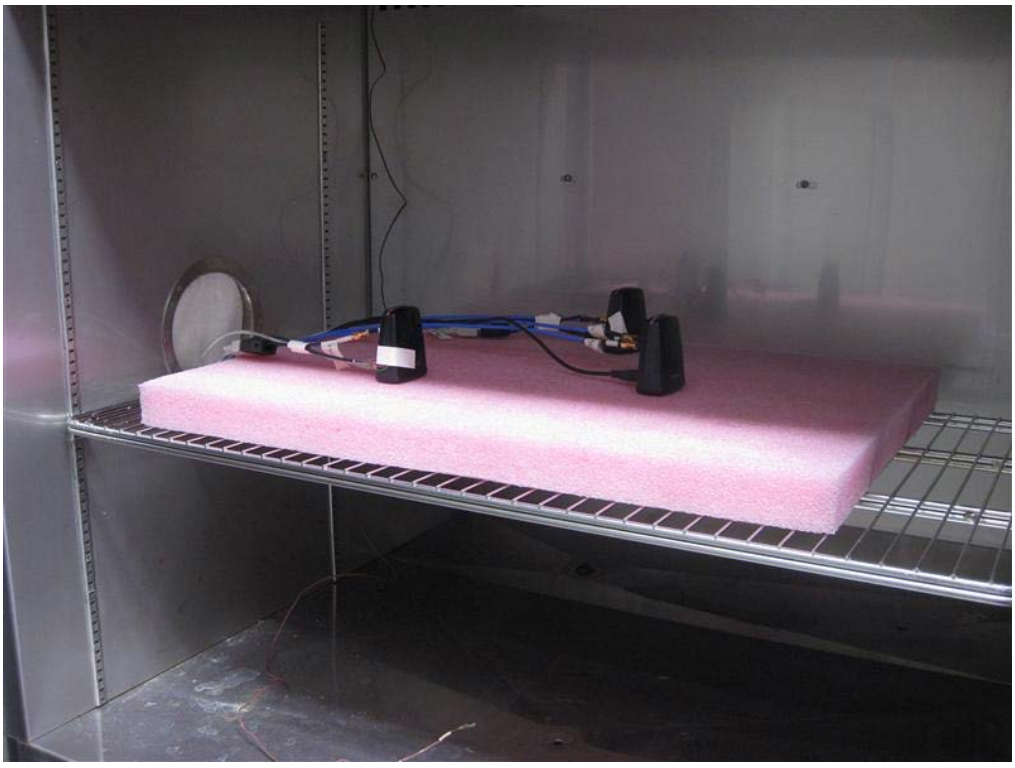


Photo 4.22.2 Test setup regarding occupied bandwidth.

# 5. National registrations and accreditations

## 5.1 DANAK Accreditation

**Organization:** Danish Accreditation and Metrology Fund - DANAK, see www.danak.dk and www.ilac.org

**Registration Number:** 19

**Area Number:** C

DANAK is part of ILAC (International Laboratory Accreditation Cooperation) including its MRA (Mutual Recognition Arrangement). The MRA includes the Australian NATA and Canadian SCC.

CISPR 22 is equivalent to AS/NZS CISPR 22, and therefore this report can be used for applying the **Australian C-Tick mark** for IT equipment, when this test has been passed.

CISPR 22:2008 is equivalent to CAN/CSA CISPR 22-10 specified in ICES-003:2012, and therefore this report can be used for approval in Canada for IT equipment, when this test has been passed.

## 5.2 FCC Registrations

**Organization:** Federal Communications Commission, USA

**Registration Number:** 90529

**Facilities:** EMC room 2 Hørsholm (EMC-2)
EMC room 3 Hørsholm (EMC-3)
EMC room 4 Hørsholm (EMC-4)
EMI room Hørsholm (EMC-5)

## 5.3 VCCI Registrations

**Organization:** Voluntary Control Council for Interference by Information Technology, Japan

**Member Number:** 910

**Facilities:**

| | |
|---|---|
| EMC room 2 Hørsholm (EMC-2): | C-707 and T-1547 |
| EMC room 3 Hørsholm (EMC-3): | C-2532 and T-1548 |
| EMC room 4 Hørsholm (EMC-4): | C-2533 and T-1549 |
| EMI room Hørsholm (EMC-5): | R-1180, C-706, T-1550 and G-470 |

## 5.4 IC Registrations

**Organization:** Industry Canada, Certification and Engineering Bureau

**Registration Number:** IC4187A-5

**Facilities:** EMI room Hørsholm (EMC-5)

# 6. List of instruments

| No | **Category** | **Manufacturer** | **Type no** | **Cal. date** | **Cal. exp.** |
|---|---|---|---|---|---|
| 29301 | ARTIFICIAL MAINS NETWORK | ROHDE & SCHWARZ | ESH2-Z5 | 05-02-2013 | 05-02-2014 |
| 29499 | BROADBAND RF PREAMPLIFIER | EC/MTS TELEMETER | TVV 711 | 11-12-2012 | 11-12-2013 |
| 29797 | BILOG ANTENNA, 30-2000 MHz | CHASE ELECTRICS LTD | CBL 6111A | 26-10-2011 | 26-10-2013 |
| 29861 | EMI-SOFTWARE Ver. 1.60 | ROHDE & SCHWARZ | ES-K1, PART: 1026.6790.02 | | |
| 49086 | REMI EMISSION SOFTWARE PACKAGE v. 2.133, ROOM 5 | NeWeTec | REMI | | |
| 49183 | POWER SUPPLY | TTI | PL 320 | | |
| 49321 | SPECTRUM ANALYZER, 50 GHz WITH OPTION 006 | HEWLETT-PACKARD | 8565E | 20-06-2012 | 20-06-2013 |
| 49421 | IMPULSE VOLTAGE LIMITER (BNC) | ROHDE & SCHWARZ | ESH3/Z2 | 21-06-2012 | 21-06-2013 |
| 49548 | VECTOR NETWORK ANALYZER | ROHDE & SCHWARZ | ZVL6 | 08-01-2013 | 08-01-2014 |
| 49600 | SPECTRUM ANALYZER / MEASUREMENT RECEIVER | ROHDE & SCHWARZ | ESU40 | 08-01-2013 | 08-01-2014 |
| 49624 | DUAL RIDGE HORN ANTENNA – 1 GHz - 26GHz (2 GHz – 32 GHz) | SATIMO | SH2000 | 19-09-2011 | 19-09-2014 |
| 49625 | SRD COAX SWITCH MATRIX USED IN 1 GHz TO 26 GHz SRD ANTENNASYSTEM | DELTA | COAX SWITCH MATRIX | 11-06-2012 | 11-06-2013 |

# Annex 1

## Transmitter out-of-band emission table

## Transmitter out-of-band Emission Table, GN radio

| | |
|---|---|
| Project No. | T205844-2 |
| Client | GN Hearing |
| Product | FD-2 |

| | |
|---|---|
| Specification: | FCC CFR 47 Part 15, Subpart C, §15.249<br>RSS-210, Issue 8:2010, A8.5 |
| Requirement: | All out-of-band emission shall be below the general limit (54 dBuV/m) |

The table below lists all out-of-band emissions exceeding the general emission limit of 500 uV/m (54 dBuV/m) as wells as the measured in-band emissions for reference.
The data is an extract of the measurement results reported in chapter 4 of the main report.

| | Frequency [MHz] | Reading [dBuV, Av] (BW: 1 MHz) | Transducer Factor [dB] (Cables and Amplifiers) | Antenna Correction Factor [dB] | Result [dBuV/m, AV] (Reading - TF + AF) | Limit [dBuV/m, AV] (Max. in-band emission - 30 dB) | Margin [dB] (Limit - Result) | Pass/Fail | Note |
|---|---|---|---|---|---|---|---|---|---|
| | 2404 | 90,6 | 29,8 | 33,2 | 94,0 | In-band | - | - | Tx @ 2404 MHz, Fundamental |
| | 7209 | 54,1 | 56,5 | 37,9 | 35,5 | 54,0 | 18,5 | PASS | Tx @ 2404 MHz, 3nd harmonic |
| | 9605 | 48,5 | 49,5 | 39,3 | 38,3 | 54,0 | 15,7 | PASS | Tx @ 2404 MHz, 4rd harmonic |
| | 12017 | 42,9 | 47,8 | 41,0 | 36,1 | 54,0 | 17,9 | PASS | Tx @ 2404 MHz, 5th harmonic |
| | 2441 | 89,6 | 29,1 | 33,1 | 93,6 | In-band | - | - | Tx @ 2441 MHz, Fundamental |
| | 7309 | 57,0 | 55,9 | 37,5 | 38,6 | 54,0 | 15,4 | PASS | Tx @ 2441 MHz, 3nd harmonic |
| | 9755 | 44,3 | 48,9 | 39,7 | 35,1 | 54,0 | 18,9 | PASS | Tx @ 2441 MHz, 4rd harmonic |
| | 12201 | 44,5 | 48,1 | 40,5 | 36,9 | 54,0 | 17,1 | PASS | Tx @ 2441 MHz, 5th harmonic |
| | 2478 | 90,3 | 30,2 | 33,9 | 94,0 | In-band | - | - | Tx @ 2478 MHz, Fundamental |
| | 7434 | * | * | * | * | * | * | * | Tx @ 2478 MHz, 3nd harmonic |
| | 9912 | * | * | * | * | * | * | * | Tx @ 2478 MHz, 4rd harmonic |
| | 12390 | * | * | * | * | * | * | * | Tx @ 2478 MHz, 5th harmonic |
| | 14400 | 43,1 | 48,2 | 40,8 | 35,7 | 54,0 | 18,3 | PASS | |

** : The result is below the general limit (54 dBuV/m)*

| | |
|---|---|
| Max. in-band emission: | 94,0 dBuV/m, AV @ 3 m |

| | |
|---|---|
| Test result: | All out-of-band emission is below the general limit (54 dBuV/m) |
| Compliant: | Yes. |

## Transmitter out-of-band Emission Table, BTLE radio

| | |
|---|---|
| Project No. | T205844-2 |
| Client | GN Hearing |
| Product | FD-2 |

| | |
|---|---|
| Specification: | FCC CFR 47 Part 15, Subpart C, §15.249<br>RSS-210, Issue 8:2010, A8.5 |
| Requirement: | All out-of-band emission shall be below the general limit (54 dBuV/m) |

The table below lists all out-of-band emissions exceeding the general emission limit of 500 uV/m (54 dBuV/m) as wells as the measured in-band emissions for reference.
The data is an extract of the measurement results reported in chapter 4 of the main report.

| | Frequency [MHz] | Reading [dBuV, Av] (BW: 1 MHz) | Transducer Factor [dB] (Cables and Amplifiers) | Antenna Correction Factor [dB] | Result [dBuV/m, AV] (Reading - TF + AF) | Limit [dBuV/m, AV] (Max. in-band emission - 30 dB) | Margin [dB] (Limit - Result) | Pass/Fail | Note |
|---|---|---|---|---|---|---|---|---|---|
| | 2372 | 39,4 | 29,8 | 43,7 | 53,3 | 54,0 | 0,7 | PASS | |
| | 2314 | 36,8 | 30,0 | 43,6 | 50,4 | 54,0 | 3,6 | PASS | |
| | 2569 | 40,9 | 29,1 | 41,9 | 53,7 | 54,0 | 0,3 | PASS | |
| | 2568 | 39,9 | 29,2 | 41,9 | 52,6 | 54,0 | 1,4 | PASS | |
| | 2402 | 88,1 | 29,8 | 33,2 | 91,5 | In-band | - | - | Tx @ 2402 MHz, Fundamental |
| | 7209 | * | * | * | * | * | * | * | Tx @ 2402 MHz, 2nd harmonic |
| | 9605 | * | * | * | * | * | * | * | Tx @ 2402 MHz, 3rd harmonic |
| | 12017 | * | * | * | * | * | * | * | Tx @ 2402 MHz, 4th harmonic |
| | 2441 | 87,3 | 29,1 | 33,1 | 91,3 | In-band | - | - | Tx @ 2441 MHz, Fundamental |
| | 7309 | * | * | * | * | * | * | * | Tx @ 2441 MHz, 2nd harmonic |
| | 9755 | * | * | * | * | * | * | * | Tx @ 2441 MHz, 3rd harmonic |
| | 12201 | * | * | * | * | * | * | * | Tx @ 2441 MHz, 4th harmonic |
| | 2480 | 87,8 | 30,2 | 33,9 | 91,5 | In-band | - | - | Tx @ 2480 MHz, Fundamental |
| | 4960 | * | * | * | * | * | * | * | Tx @ 2480 MHz, 2nd harmonic |
| | 7440 | * | * | * | * | * | * | * | Tx @ 2480 MHz, 3rd harmonic |
| | 9920 | * | * | * | * | * | * | * | Tx @ 2480 MHz, 4th harmonic |

** : The result is below the general limit (54 dBuV/m)*

| | |
|---|---|
| Max. in-band emission: | 91,5 dBuV/m, AV @ 3 m |

| | |
|---|---|
| Test result: | All out-of-band emission is below the general limit (54 dBuV/m) |
| Compliant: | Yes. |